



ESSENTIAL CONCEPTS

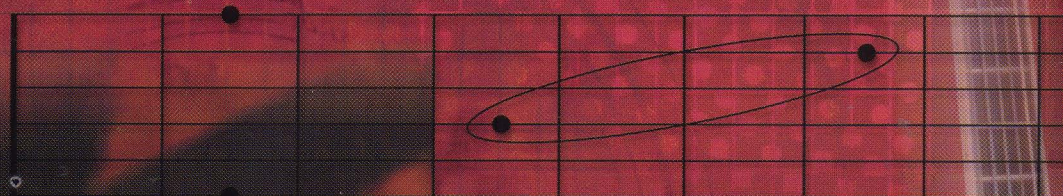
Guitar FRETBOARD WORKBOOK

A Complete System for
Understanding the Fretboard

FOR ACOUSTIC OR ELECTRIC GUITAR

Pattern 4

Pattern 5



VII

By Barrett Tagliarino

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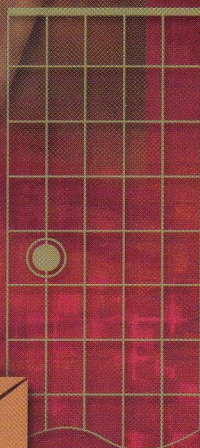
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Acknowledgments

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Barrett Tagliarino

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Introduction

Learning to play a song on the guitar is an accomplishment. No doubt about it, when it all comes together, it sounds great. But here's a question for you: Do you really *understand* what you're playing? What happens if you make a mistake? Chances are, you're like a lab rat learning the correct path through a maze: Move the cheese, change the walls around, and you're lost. You go back to square one.

What if you really knew where you were, and where you needed to go, at all times? What if you *understood* the fretboard of your guitar? Actually understanding the fretboard would mean you'd be flying over the landscape, looking down at all the possible paths your fingers could take.

This workbook will help you gain that higher level of understanding of the fretboard. In each chapter, an essential concept is explained and immediately followed by exercises for you to complete. The knowledge is reinforced in the time-tested way we all learned our ABC's as children: by *repeating ideas aloud* and *writing them down*.

Draw/Describe/Play

I've spent many frustrating hours watching my students look at a chord or scale shape in a book and immediately try to play it. They waste time fumbling over the notes. They get lost. Then they have to start over and look at the book again. Weeks later, they are still lost, because they did not take the time to plant a clear image of it in their minds. A three-pronged attack will cure this problem: **draw/describe/play**. When you can *draw* a diagram of a chord or scale by yourself and verbally *describe* the locations of the notes, only then should you start to *play* it.

Often my students realize on their own that drawing diagrams is the best way to learn the fretboard. They do it without being told, and then bring the diagrams for me to check for mistakes and to discuss fingerings. These are the people that make the fastest progress. So, I have my students to thank for showing me how they learn. Together we created exercises that REALLY WORK to help you learn the guitar. Writing and talking about this material burns it into your brain.

By completing these exercises, you can expect a real difference in the way you think about the guitar fretboard in just a few months. Along with new insight, big improvements in your playing will naturally come over the next few years. The gray areas that you now skip over will gradually shrink and then disappear.

How to Use This Book

Later chapters in this book depend heavily on the ones at the beginning. Expect to keep going back. If you are in your first few years of serious guitar study, I recommend spreading this program out over one year. Spend a few minutes a day for at least a week reviewing each chapter.

Start each chapter by thinking about the objective stated at the beginning. If you think you already have attained the objective, go right to the exercises. If you can complete all of them quickly with no mistakes, you can go on to the next chapter. If not, go back and study the chapter. After studying the text, if the exercises are still too hard, it probably means you missed something from a previous chapter. If this is new material for you, then it is very important that you take your time! Make sure you understand each chapter and complete all the exercises before moving on.

If you decide you need more practice (most people do), I recommend repeating the diagrams in a separate notebook of guitar diagram paper. You can buy it or just make it yourself with blank paper and a ruler.

Frequently Asked Questions

Why do I need to draw diagrams and say all this stuff out loud? Why can't I just play?

I'm telling you to draw and describe fretboard shapes because I want you to learn them FAST. By themselves, scales, chords, and arpeggios are nothing but exercises and will bore you. The sooner you learn these basics, the sooner you will start playing real music that excites you. Attempting to play music of any sophistication without these fundamentals will likely lead to frustration.

What if I don't think I did it right?

The answers are included in the back of the book. It is impossible to cheat, so look there anytime.

Hey! You left out...?

Many possible fingerings are not included in the book. You are encouraged to draw more diagrams than are included here. By the last ten chapters, the possible number of shapes for scales, chords, and arpeggios becomes astronomical. The goal of this book is that by the time you finish what's here, you will be able to visualize the correct locations for anything you may encounter or imagine.

How should I practice playing these shapes?

Once you have memorized one of the fundamental fretboard shapes, play it in time with a metronome set to a slow tempo (50-60 beats per minute). If you have not played extensively with a metronome, the odds are that your timing is bad. Let me rephrase that: *If you are a human being, your timing is bad and you need to practice with a metronome.*

For scales and arpeggios, it will be clear how to practice with a metronome. Play them up and down in eighth notes: two notes for every click of the metronome. For the intervals and chords, it is most productive to play a few of them in sequence to keep your brain and fingers working. Practice them in whole notes (one chord for every four clicks) or half notes (one chord for every two clicks).

Here are a few important guidelines for practicing:

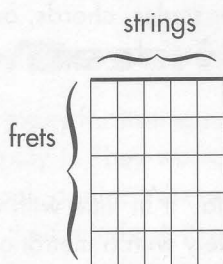
- Practice intensely with no distractions for very short time periods, and as often as you can. 15-minute practice sessions twice daily are a good place to start.
- Isolate material into the smallest possible pieces you can learn and take them one at a time. Do not try to learn two new things at once.
- Make a clean mental imprint of new information without touching your guitar at first. Take your time and learn it right the first time. Avoid going back to the book to see it again.
- Practice the same material until it is committed to long-term memory. This usually takes at least two weeks. Keep a log so you know how long you've been working on each new shape.
- Do not practice mistakes. Go slow enough that you almost never make a mistake.
- Be patient with yourself. How long it takes is how long it takes.
- Congratulate yourself for each small accomplishment. A positive mental attitude is essential to help you keep going.

DIAGRAMS, FRETS, AND STRINGS

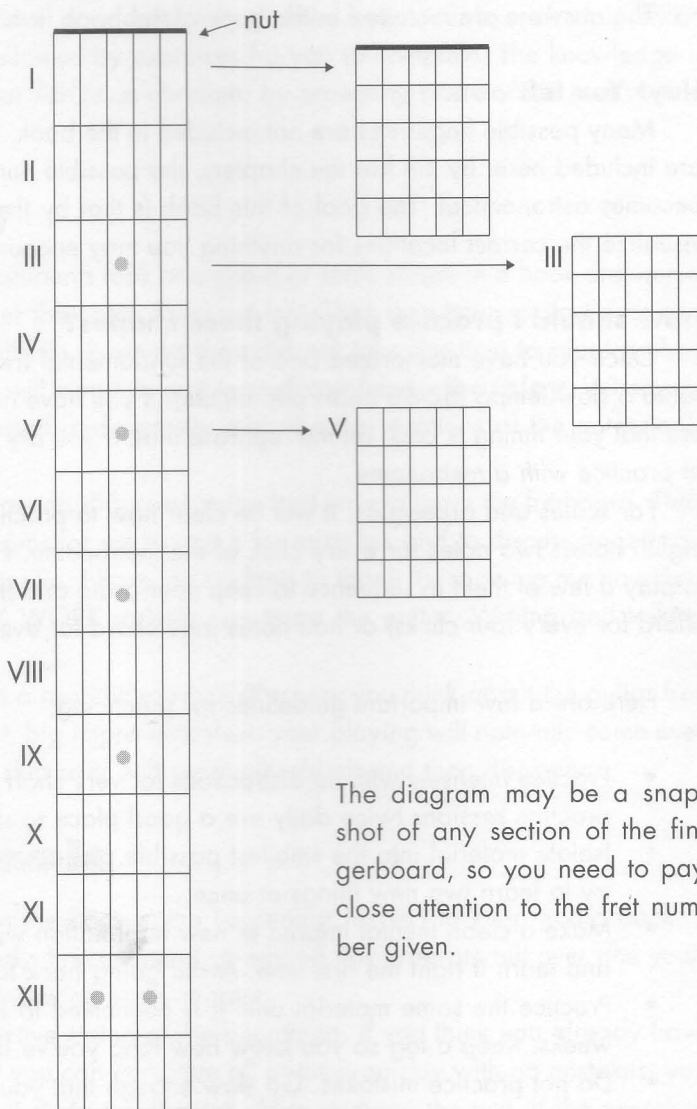
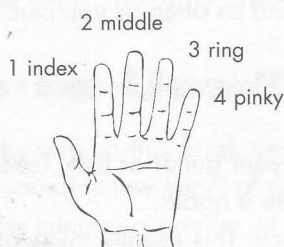
Objective: Understand fretboard diagrams. Name the open strings.

Frets

Standard guitar diagrams have horizontal lines for frets and vertical lines for strings.



Fret numbers are indicated, in this book, with Roman numerals that go up as they get closer to the body of the guitar. They are written next to the place where your finger should be, which is between—actually slightly *behind*—the metal fretwires. The fret number usually shows the position of the first (index) finger.



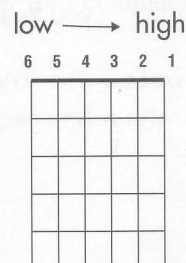
The diagram may be a snapshot of any section of the fingerboard, so you need to pay close attention to the fret number given.

Strings

The strings are numbered 6 through 1. The 6th string is the thickest and the 1st is the thinnest. The 1st string is the highest pitched string.

Going "up" to the next string means going "up in musical pitch." Unless you're playing the guitar while standing on your head (see Chapter 19), your fingertip gets closer to the ground when you move it to a higher string. In this regard, the numbers are the opposite of what you might expect. It's too late for anybody to change this now. All guitar books refer to the strings in this way.

Beginning with the 6th string, the letter names of the strings are: **E A D G B E**. Go ahead and memorize them before continuing. When you have them memorized, you should be able to state clearly to all within earshot that the 4th string is D; the 2nd string is B, and so forth. We're going to try to keep the amount of memorization low, but some is unavoidable.



Exercise #1

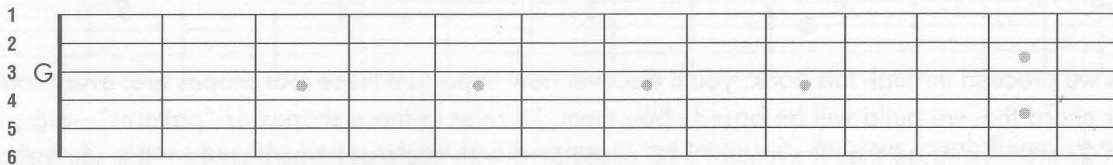
Label the strings on the following blank diagram. Do it from memory, covering up the previous paragraph with your hand. The 6th string has been named for you.

6 5 4 3 2 1



Exercise #2

When a diagram covers many frets, it is flipped over on its left side. Let's use this diagram to repeat the previous assignment for practice. Label the strings. Go!



Exercise #3

Answer these questions *aloud*, and fill in the blanks.

1. What is the letter name of the third string? _____
2. Which number string is the B string? _____
3. What is the name of the fifth string? _____
4. Which number string is G? _____
5. What is the name of the sixth string? _____
6. Which number string is A? _____
7. What is the name of the second string? _____
8. Which number string is E? _____
9. What is the name of the first string? _____
10. Which number string is D? _____

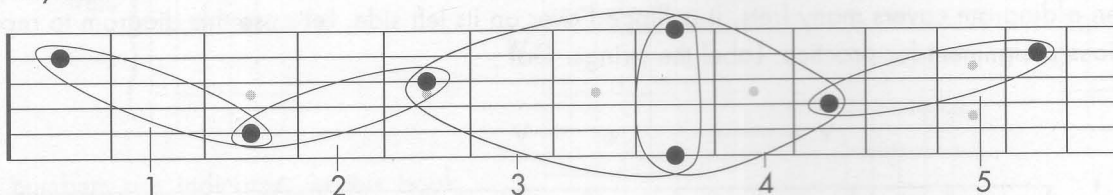
THE FIVE ROOT SHAPES

Objective: Learn the five root shapes.

Every scale, chord, or melody is a collection of notes that has one main note called a *root*. The root is the note that guides us. Without the root, we're lost.

When we know where one root is, we can find another nearby. The two roots form a **root shape**. There are five root shapes in all, so we number them 1 through 5. They're shown below in the key of C. This is the Rosetta Stone, the Holy Grail, and the Magna Carta of guitar comprehension. If you were watching a major motion picture production, a massive choir would kick in **RIGHT NOW!**

Key of C



As we proceed through this book, you'll discover how important these root shapes are; every scale, arpeggio, or chord that we build will be based upon them. I'll refer to these shapes as "patterns"—e.g., Pattern 1, Pattern 2, etc.—because they'll eventually be associated with scale patterns based on the same shapes.

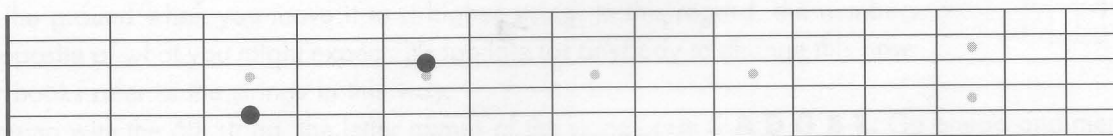
For now, let's look at, play, and thoroughly learn all five root shapes, one at a time, noting what distinguishes each one from the others. Put your first and third fingers on the notes in the diagram and repeat aloud:

"Pattern 1 has roots on the second and fifth strings, two frets apart!"



Now move your *first* finger up to the exact place the third finger formerly occupied at the third fret. Then put your third finger down at the fifth fret of the third string, all the while barking in strident declaration:

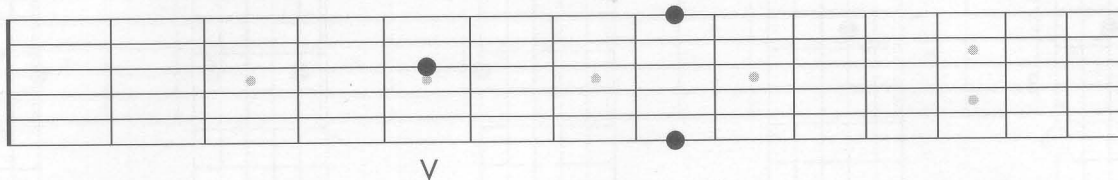
"Pattern 2 has roots on the fifth and third strings, two frets apart!"



Notice that Pattern 2 shares a root on the fifth string with Pattern 1 above. Each pattern overlaps the succeeding pattern. This overlap will apply to all chords, scales, and arpeggios we'll study.

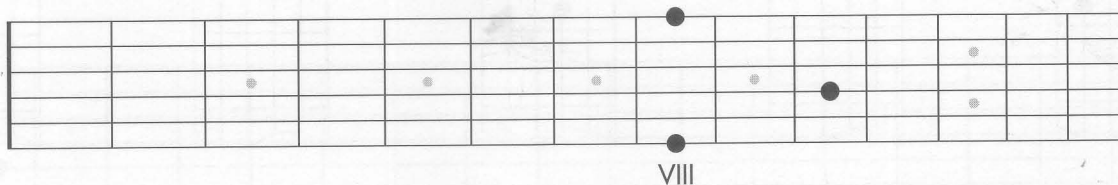
When you play the roots in Pattern 3, you do *not* have to stretch your hand and play all three notes at once. The idea is to learn the spatial relationships. Just play the C on the third string at the fifth fret with your first finger, and play the remaining two notes one after another with your fourth finger. Reinforce the new shape by saying:

"Pattern 3 has roots on the third, first, and sixth strings, three frets apart!"



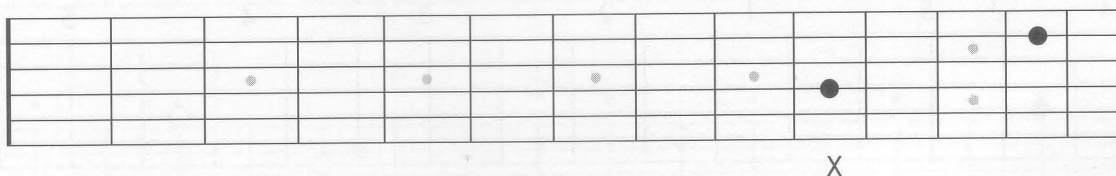
Pattern 4 shares two notes with Pattern 3. Place your *first* finger on either the first or sixth string at the eighth fret, and your *third* finger on the fourth string at the tenth fret. Position your fingers correctly, then say aloud:

"Pattern 4 has roots on the first, sixth, and fourth strings, two frets apart!"

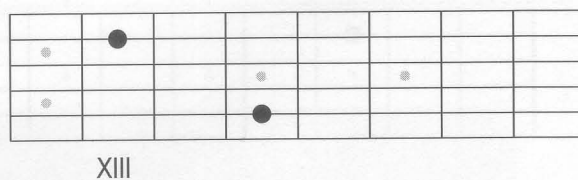


For Pattern 5, place your first finger on the fourth string at the tenth fret. Put your fourth finger at the thirteenth fret, second string. Once again:

"Pattern 5 has roots on the fourth and second strings, three frets apart!"

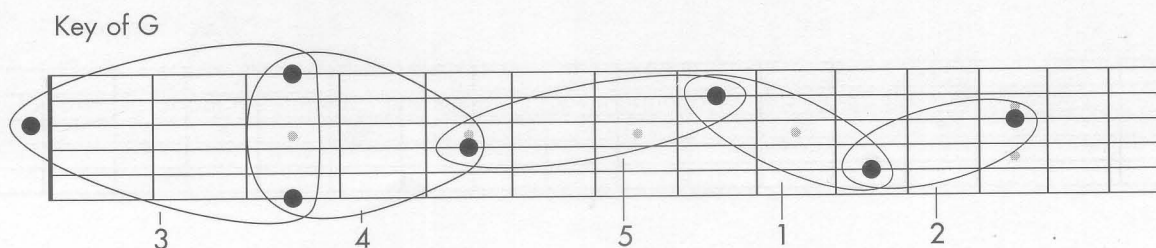


Now we have played all five root shapes. We aren't finished yet, however. The cycle repeats itself up the fretboard until the guitar runs out of frets. So now we play Pattern 1 again, starting with the highest note we have played so far, at the thirteenth fret.



Continue with Pattern 2 at the fifteenth fret and as many more as you can comfortably play.

The five root shapes may start on any note, anywhere on the fretboard, but the shapes are always the same and always occur in the same order—though the sequence may begin at a different point. For example, here are the five root shapes as they occur on the fretboard in the key of G:



Exercise #4

Each note below belongs to two root shapes. Complete both and label with pattern numbers. The first one is done for you.

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

Exercise #5

Draw the five root shapes based on the following notes. Label with pattern numbers. The first one is done for you.

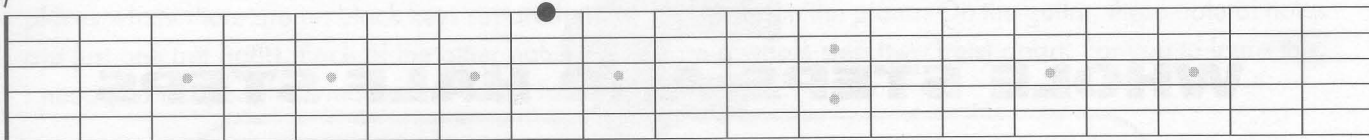
1)

2)

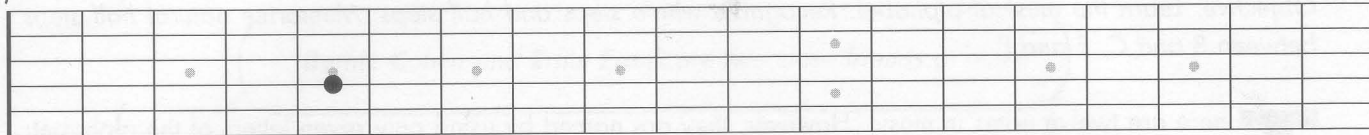
3)

4)

5)



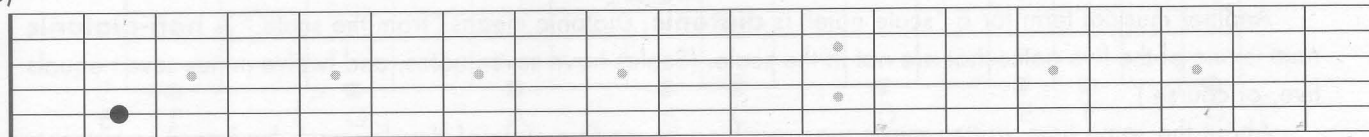
6)



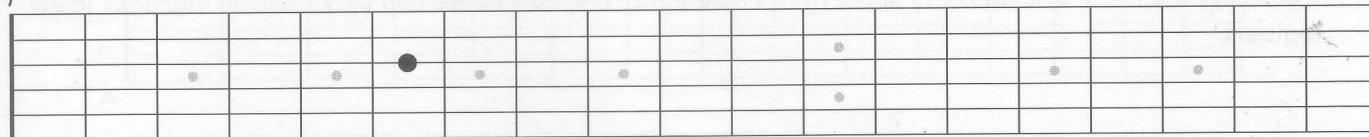
7)



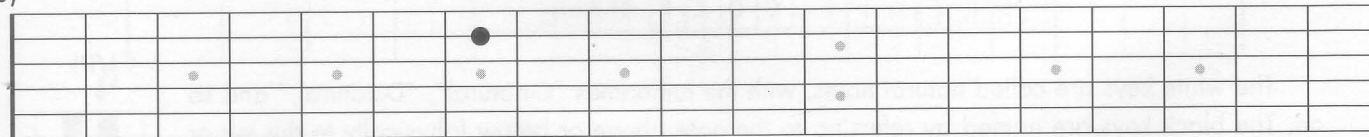
8)



9)



10)



Play

Once you've completed the above exercise, play through the diagrams on your guitar. Start at the bottom of the fretboard, and work your way up. Say the root shapes aloud as you play them, like this:

*"Number one: Pattern 4...Pattern 5...Pattern 1...Pattern 2...Pattern 3...Pattern 4...Pattern 5...
Number two..."*

Don't worry about note names; just concentrate on naming (and playing) the root shapes.

WHOLE STEPS AND HALF STEPS

Objective: Learn the musical alphabet. Recognize whole steps and half steps. Memorize natural half steps between B and C, E and F.

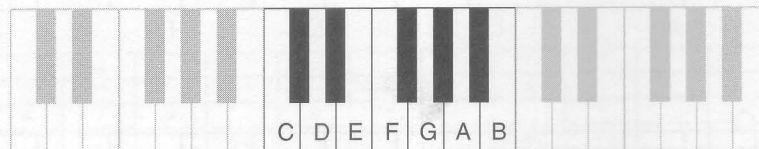
There are twelve notes in music. However, they are named by using only seven letters of the alphabet: A, B, C, D, E, F, and G. Isn't that confusing?

We use seven letters because most music is based on seven-note scales. A scale can be spelled quickly by using all seven letters. Some of the letters may have **accidentals** (\sharp , \flat , or \natural) after them to show exactly which of the twelve possible notes is desired. Accidentals are of vital importance, so repeat this next sentence aloud:

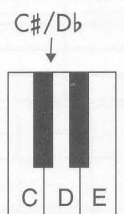
*"The **sharp** (\sharp) raises a note, the **flat** (\flat) lowers a note, and the **natural** (\natural) puts it back."*

Another musical term for a "scale note" is **diatonic**. Diatonic means "from the scale." A **non-diatonic** note is one of the five notes that are not in the scale. (Scales have seven notes, and twelve minus seven equals five, of course.)

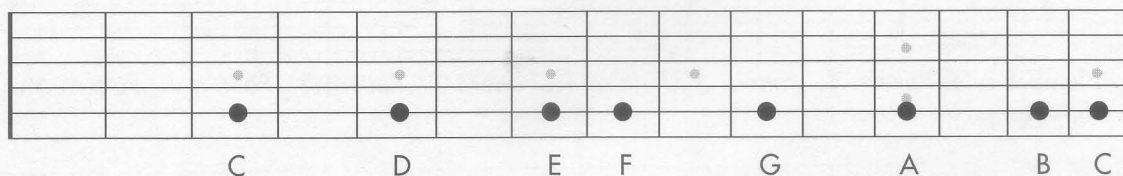
About the same time written music was reaching its modern state of development, keyboard instruments were being perfected. The guitar is an older instrument, but it follows the rules that are most easily illustrated by the keyboard. The keyboard is laid out so that the seven white keys form a C major scale. In between the white keys are five black keys. The entire twelve-note pattern repeats so we can play music in higher or lower registers.



The white keys are called natural notes, with the full names "C-natural", "D-natural," and so on. The black keys are named by referring to the note above or below (physically to the left or right). For instance, the black key between C and D may be called "C-sharp" ($C\sharp$), or it may be called "D-flat" ($D\flat$).



To see how the system applies to the guitar, let's take a look at the natural notes in a piano-like fashion: namely, up and down on a single string. Let's use the fifth string.



Notice that some notes are two frets apart, while others are right next to each other. The distance of two frets is called a **whole step** (a.k.a., a "step"). The distance of one fret is called a **half step**.

We need to remember that there is a half step between B and C, and between E and F. These are the places where there are no black keys separating the white keys on the piano. On the guitar, these natural notes are just one fret apart. Each of the other natural notes are a whole step (two frets) apart. For you to learn this, I need you to open the window and holler to the world outside:

*"There is a half step between **B** and **C**, and a half step between **E** and **F**!"*

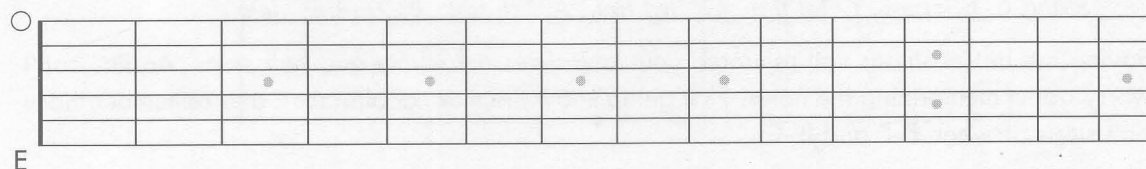
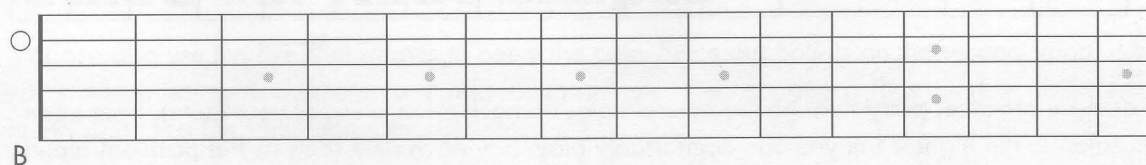
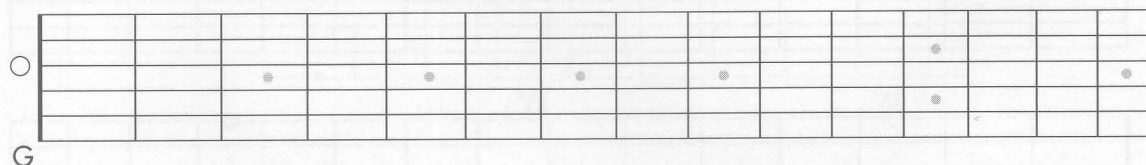
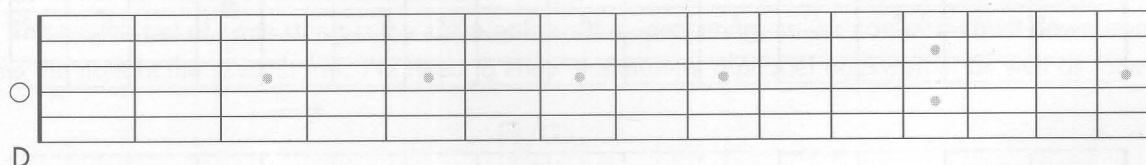
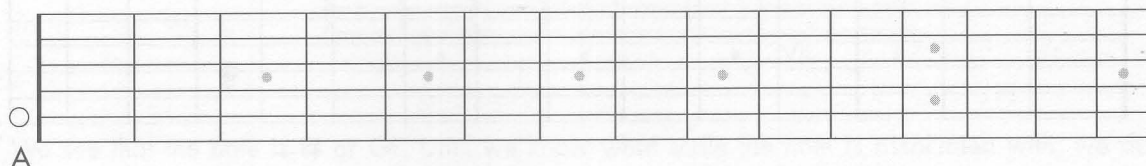
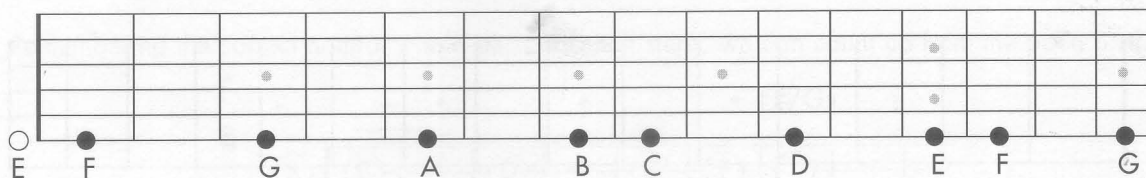
Then say this:

*"**B**ernie **C**ohen and **E**rnies **F**rank are two close friends of mine!"*

The strings on the guitar are like six little pianos, each starting on a different note. Now for this next exercise, we'll draw the natural notes on each string, in order to reinforce the idea that there is a half step from B to C, and a half step from E to F. That's all you need to think about while you do this. Don't try to memorize every note on the fretboard yet.

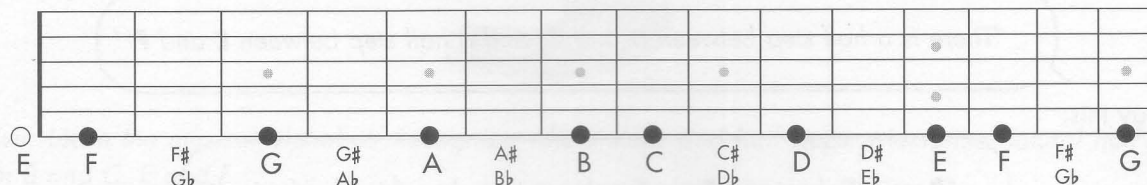
Exercise #6

Draw the natural notes on each string. Write the names below. The sixth string is done for you.



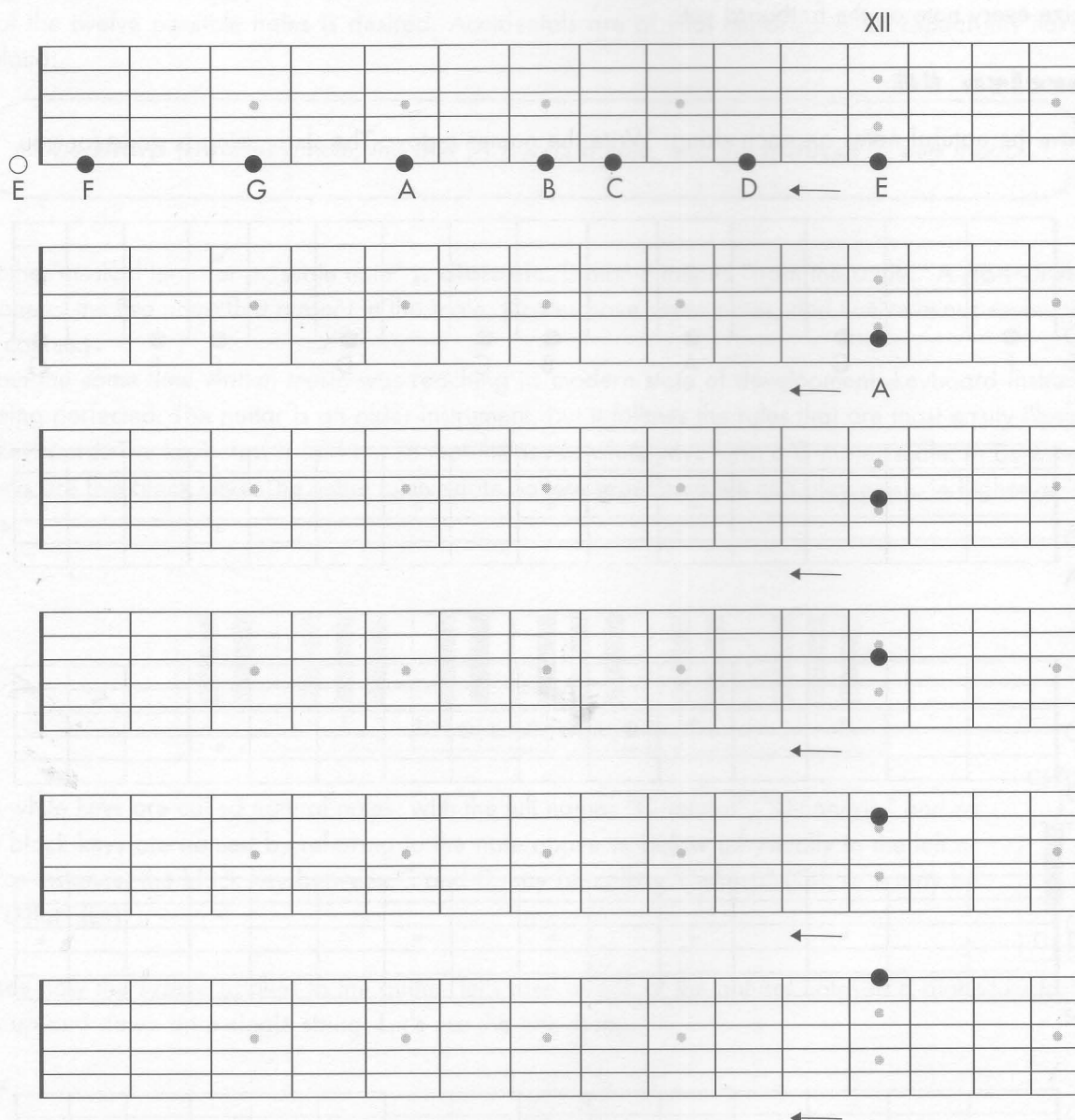
Exercise #7

When you've completed the drawings of natural notes, go back and write the names of the five accidentals around them. Write both the sharp (#) names and the flat (b) names. Thus, each accidental will have two names. Here's how the first one will look.



Exercise #8

The notes at the twelfth fret are the same as the open strings. Use one diagram for each string and label the note at the twelfth fret. Then write the natural notes for each string again, only this time start at the twelfth fret and *spell backwards* to the open position. Remember to use half steps between F and E, as well as between C and B.



For more practice, **play** through the natural notes on each open string of your guitar, from open position to the highest fret you can comfortably play. Say each note (and its fret position) aloud as you play:

"String 6: E, open...F, 1st fret...G, 3rd fret...A, 5th fret...B, 7th fret...(etc.)"

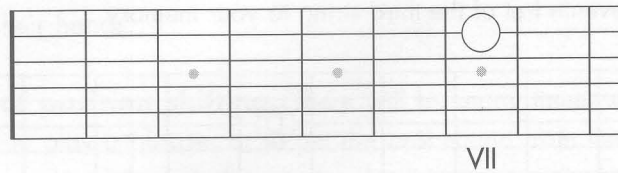
Saying the fret positions will reinforce your awareness of whole and half steps. Again, don't worry about memorizing the notes. First get to know the musical alphabet, and remember those half steps between E-F and B-C.

NOTE NAMES

Objective: Learn to name any note on the fretboard.

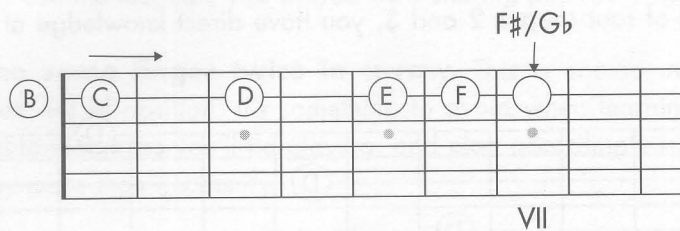
To name any note on the fretboard, use your knowledge of the natural half steps (Bernie Cohen & Ernie Frank) and the five root shapes.

For example, let's name the note at the seventh fret of the second string.



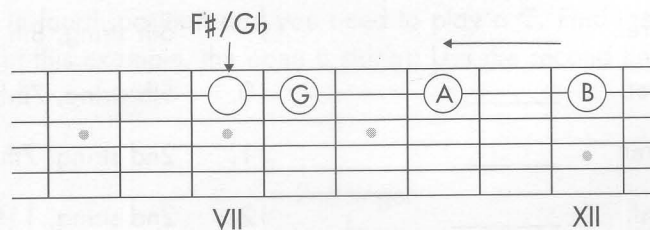
Method #1: Natural Notes

Remembering the correct natural whole steps and half steps, we can count up from the open B string:



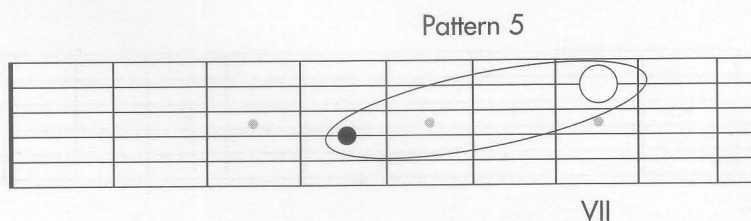
We see that the note is F# or Gb. Until we know what scale the note is associated with, we don't know whether to use the sharp name or the flat name. That's OK. We need to know both names, so we'll use both names for all accidentals in these exercises.

The twelfth fret of each string is the same note as the open string, so we can also count down from there to name the note at the seventh fret. We need to know the musical alphabet backwards, as well as forwards.

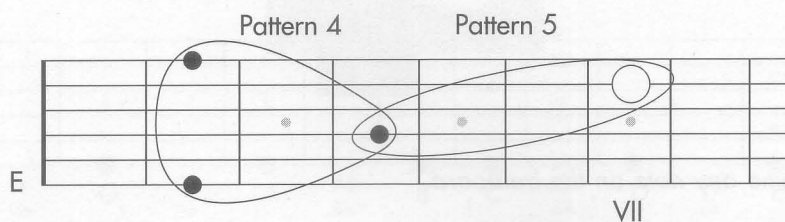


Method #2: Root Shapes

We can also use the five root shapes to name the note. Since our note is on the second string, it belongs to Pattern 5, which has roots on the second and fourth strings, three frets apart. Thus the note on the fourth fret of the fourth string has the same name as our note.

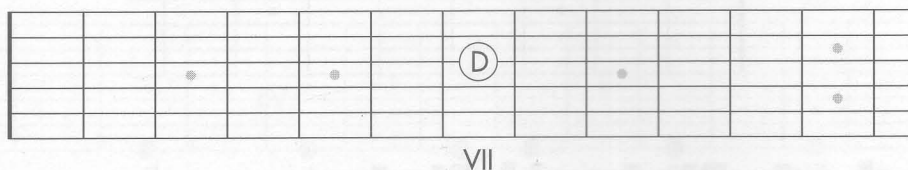


Pattern 4 has roots on the first, sixth, and fourth strings, two frets apart. Therefore the note at the second fret of the sixth string also has the same name as our note. This note is two frets above the open E, so it (and our note) is F# or Gb.

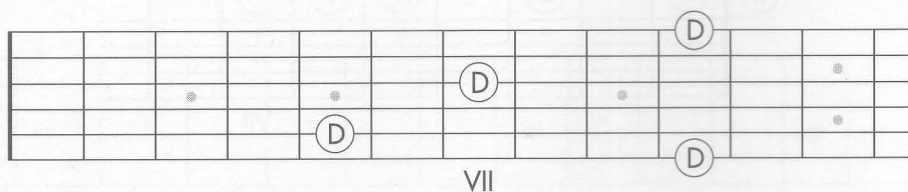


New Note: D at the 7th fret

Using root shapes to name notes works well if you memorize a few more notes besides the open strings. For instance, add the **D** at the seventh fret of the third string to your memory.



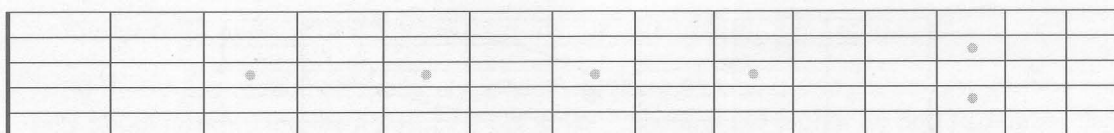
Now you'll be faster at naming the notes on the third string in this general area. And because any note on the third string is part of root shapes 2 and 3, you have direct knowledge of notes that make up those shapes.



Exercise #9

State *aloud* and write the names of the notes found at these positions on the fretboard. Use the diagram below, if needed, to help you visualize the notes.

- | | |
|---------------------------------|----------------------------------|
| 1. 3rd string, 2nd fret: _____ | 9. 6th string, 8th fret: _____ |
| 2. 5th string, 3rd fret: _____ | 10. 5th string, 7th fret: _____ |
| 3. 2nd string, 4th fret: _____ | 11. 2nd string, 7th fret: _____ |
| 4. 4th string, 6th fret: _____ | 12. 2nd string, 11th fret: _____ |
| 5. 6th string, 7th fret: _____ | 13. 4th string, 8th fret: _____ |
| 6. 6th string, 9th fret: _____ | 14. 3rd string, 10th fret: _____ |
| 7. 3rd string, 11th fret: _____ | 15. 1st string, 13th fret: _____ |
| 8. 4th string, 4th fret: _____ | |



FINDING NOTES

Objective: Practice finding notes on the fretboard in various positions.

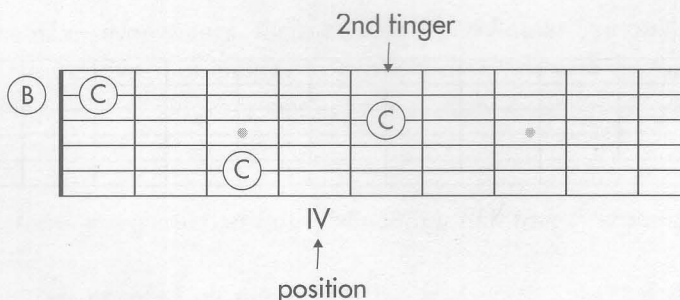
Finding notes on the fretboard can be tricky because the same note can be played at several different places. Which place is best? Usually the choice is best made by technical considerations. This book is not really about technique; it's about knowing where things are. But good technique and solid fretboard knowledge go together. When movements are smooth and economical, it's harder to get lost. This is how people play without looking at their hands.

- **Use a minimum of position shifting.** There will be many times when you'll break this rule to find the easiest way to play a phrase, or to get the best sound from the guitar. But especially when reading or learning a piece of music by ear for the first time, use minimum hand movement. Find notes as close to your current hand position as possible and play them with the closest finger.
- **Stay where you are** until you know exactly where you are going. Don't pick up your fingers or let go of the neck. Use the last note you played as a starting point for finding the next one.
- **Avoid using the same finger twice in a row.** This is another rule you'll break. When it causes you to slide out of position, it's something to avoid when learning new shapes. Be aware of the highest and lowest notes you'll be playing, and plan accordingly so that you do not have to break this rule any more than necessary.

Finding notes is a visual process, so I won't confuse you by over-explaining it. If you familiarize yourself with a few notes in various places, you can use your knowledge of natural half steps and/or root shapes to find all the others.

The following exercise will give you practice in finding notes in various fretboard positions. You may need to use any one of the four fingers of the left hand or even to shift the hand up or down by one fret to find the note you want. This is important: when a fret position is indicated on a diagram in this book, don't let your first finger go lower than that fret.

For example, say you're in fourth position and you need to play a C. Find the C by following the root shapes from a familiar note (in this example, the open B string). Use the second finger to play the C so that no position shifting is needed.



Exercise #10

Draw the note on the correct string, at the fret indicated. Use your knowledge of the natural notes or of the five root shapes. You may need to use various methods:

- count up from each open string
- count down from the 12th fret of each string
- count up or down from another familiar note (e.g., D at the 7th fret)
- choose a nearby note (e.g., E) and find that note first

1) F

VI

2) F#

IV

3) Bb

III

4) G

V

5) A

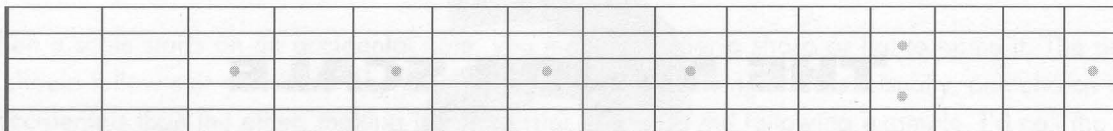
V

6) Eb

IV

7)

C



VIII

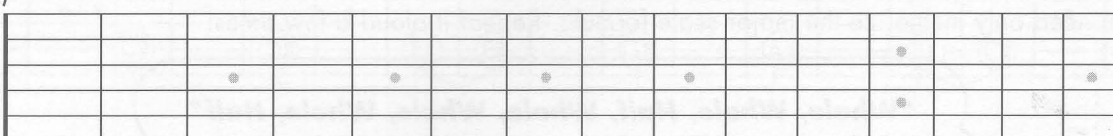
8)

B



II

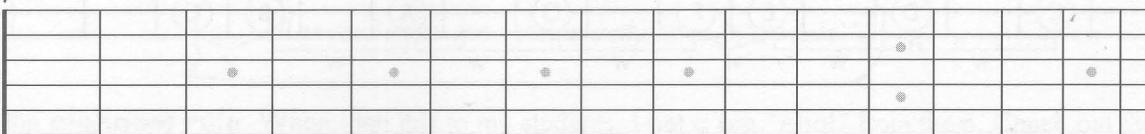
9)

D \flat 

XI

10)

C



XV

Practice

1. Spend five minutes a day naming notes aloud on the fretboard. The best way is to name the notes of any songs or licks you've learned, but you can also use random notes. So, instead of thinking "This finger goes here," say aloud, "I'm playing A \flat on the ninth fret of the second string!" Do this for at least a week.
2. Each week for the next seven weeks, focus on one natural note. Start with A and spend five minutes a day on it. Use the five root shapes to draw a diagram with all the A's on the entire fretboard. While looking at the diagram and playing each A on your guitar, name its position aloud like this:

"Fifth string, open. Third string, second fret. Sixth string, fifth fret. First string, fifth fret..."

Keep going until you've covered all the A's on the fretboard. The next day, *draw the diagram again*, and repeat the naming process. During that week, take notice of each time you play an A. Week 2, move on to B and repeat this process. (Don't stop working your way through the rest of this book; just add this to your regular practice routine.)

THE MAJOR SCALE

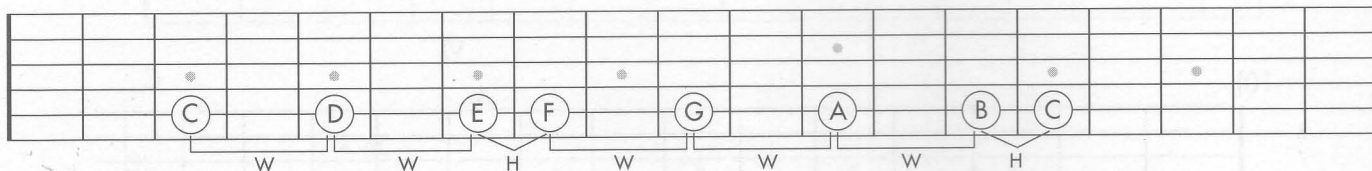
Objective: Understand and construct major scales on the fretboard.

In this chapter, you'll learn the construction of major scales starting on any note. In the next chapter, you'll work on fingering patterns for them. Eventually, you'll memorize the scales and their patterns—but it's better that you understand what scales are first.

The Major Scale Formula

The notes of a scale are referred to as **scale degrees**, or just "degrees." To figure out where the degrees are, you need only memorize the major scale formula. Repeat it aloud a few times:

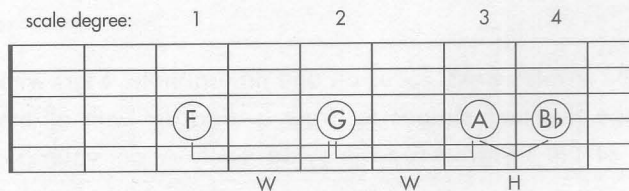
"Whole, Whole, Half, Whole, Whole, Whole, Half"



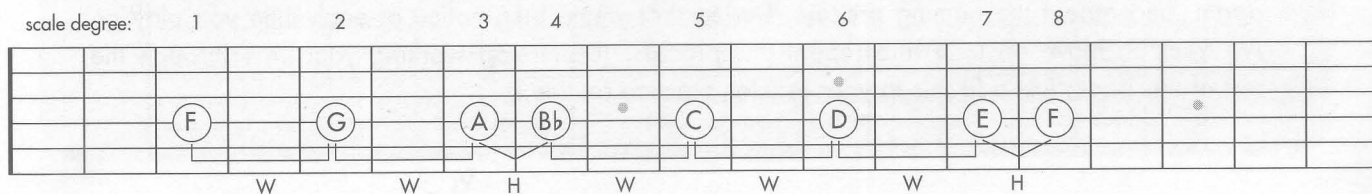
In any major scale, there are half steps between the 3rd and 4th degrees, and between the 7th and 8th degrees. There are whole steps between the other degrees. When writing a scale on paper, put carets (^) between the notes that are a half step apart, like this: 1 2 3^4 5 6 7^8.

In order to maintain this formula when starting on notes *other than C*, we have to include some accidentals (the black keys on the piano). If you remember that there are natural half steps between B-C and E-F, you'll be able to deduce what the accidentals are in any scale.

For example, let's spell the F major scale starting from F, at the third fret on the fourth string. First there is a whole step between degrees 1 and 2, F to G. Then a whole step from the 2nd to the 3rd is A. To follow the formula, we need a half step between the 3rd and 4th degrees. But B is too far—a whole step away—so we play B \flat instead. B \flat is therefore the 4th note of the F major scale.

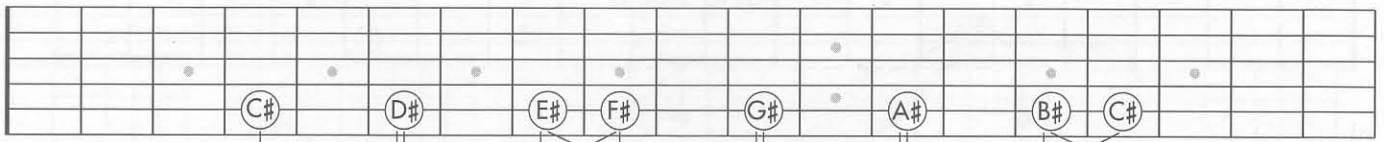
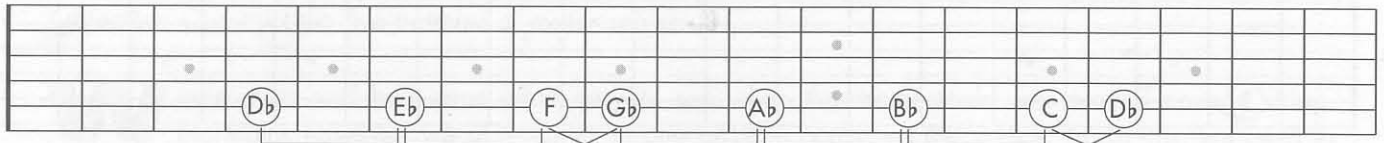


From the 4th to the 5th is a whole step. This works out to be C natural, because of the naturally occurring half step between B and C. Then two more whole steps give us D and E. The final half step from the 7th to the 8th degree brings us back to F.



Accidentals

When a scale starts on an accidental note, you may use either a sharp or flat to name it. The other note names should follow suit. *Don't mix sharps and flats together in a single scale.* Usually, one choice will have fewer accidentals than the other, making it a bit easier to use. In the following example, I'd call the scale D \flat major because it has only five flats, but C \sharp major with seven sharps is also correct.

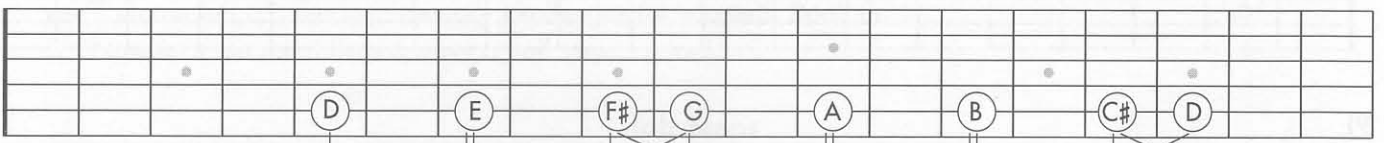


Maybe you're wondering how one note can be called F in one diagram and E \sharp in the other. It's because of this important rule about spelling scales:

"All seven letters get used exactly once in a scale."

I call it the **alphabet rule**. When I tell this to my students, I get a big "Aha!" from them. Check out the diagrams on this page again, and you'll see that each note gets its own letter and all seven letters are used once.

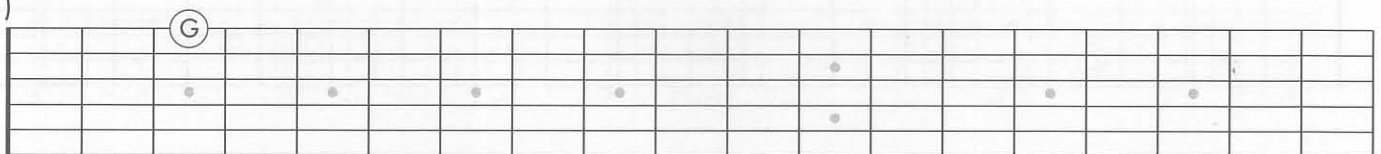
The D major scale must contain both F \sharp and C \sharp in order to follow the major scale formula *and* the alphabet rule.



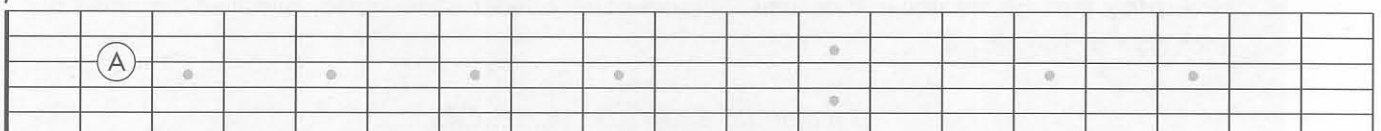
Exercise #11

Spell major scales *on one string* beginning on the notes shown below. Use the major scale formula and the alphabet rule. Name the notes aloud as you write.

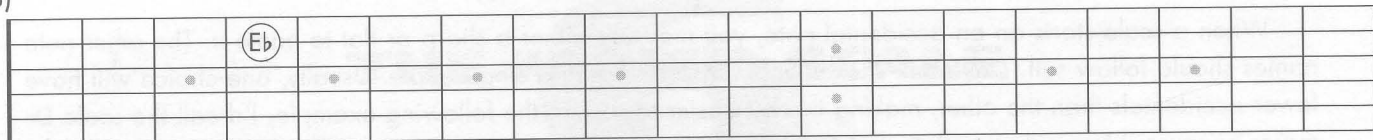
1)



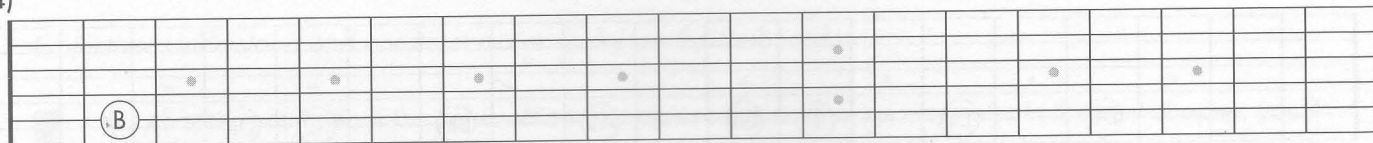
2)



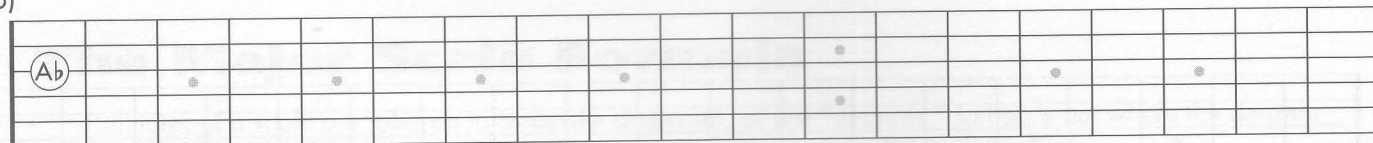
3)



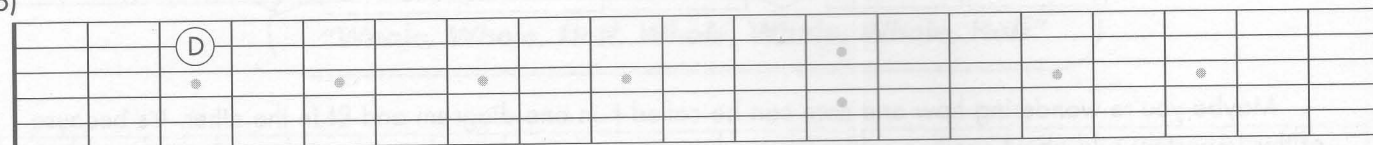
4)



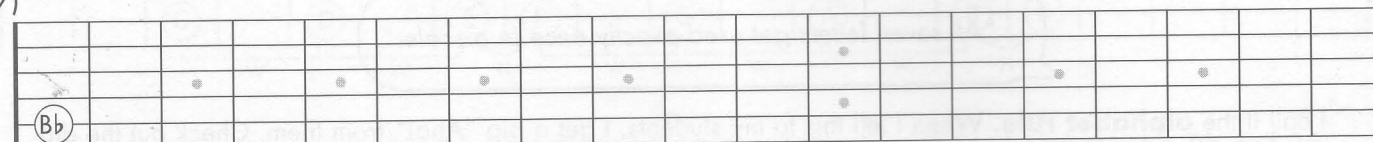
5)



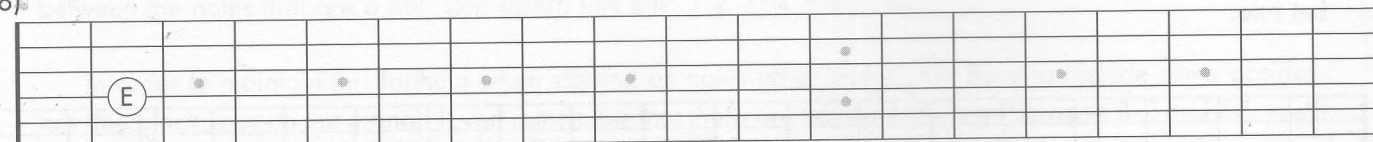
6)



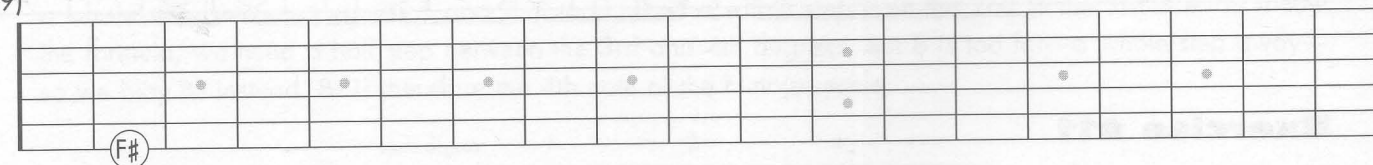
7)



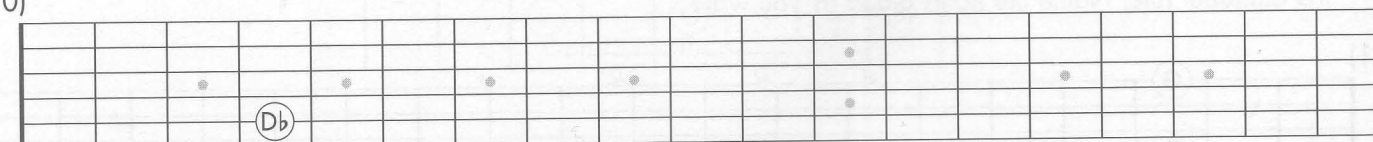
8)



9)



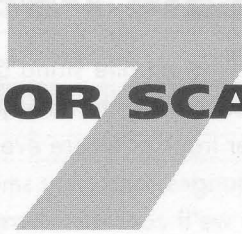
10)



Now **play** through the above diagrams. Say the name of each scale aloud, and then the name of each note as you play it:

"D major: D...E...F#...G...A...B...C#...D..."

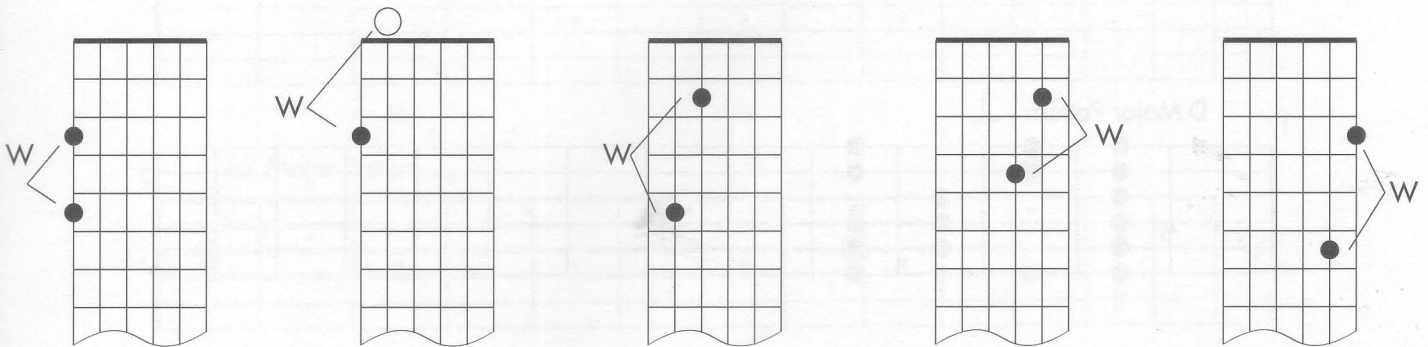
THE FIVE MAJOR SCALE PATTERNS



Objective: Construct the five patterns of major scales.

Whole steps and half steps were easy to see when the major scale was played on one string. Normally, however, we play scales *in one position* across *all* the strings. To do this, we need to know whole steps and half steps crossing from one string to the next.

Whole Steps

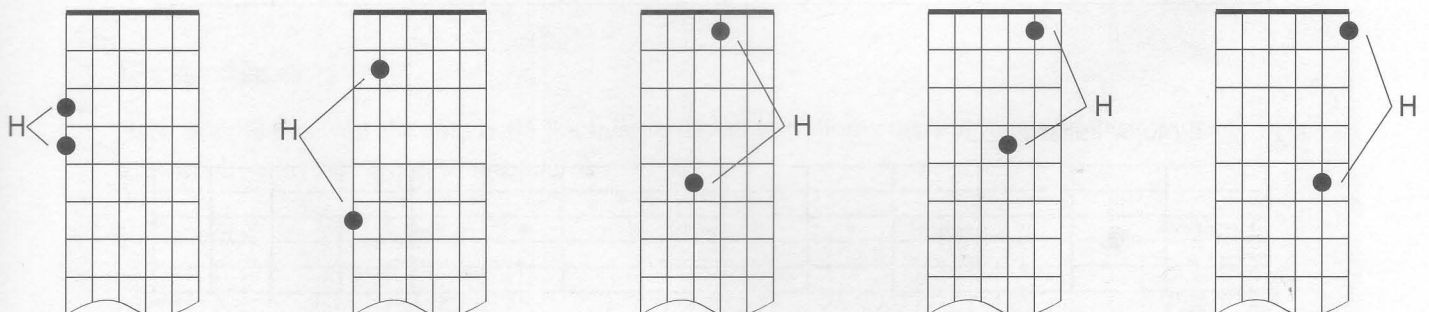


The whole step is usually a *three-fret* distance down the fretboard when ascending from one string to the next. But an exception occurs when crossing from the third to the second string. In this case, the whole step is a *two-fret* distance.

Why? Because we have to compensate for the tuning change between the third and second strings. This is true for everything we learn on the fretboard. A word to the wise: The tuning change on the second string is there for good reason. If you eliminate it to "make things easier," you won't be able to play chords, and you'll create lots of other unnecessary challenges for yourself. Don't do it.

Now let's see the different ways a half step can look.

Half Steps



The half step is usually a *four-fret* distance down the fretboard when ascending from one string to the next. The exception again occurs when crossing to the second string; in that case, the half step is a *three-fret* distance.

Building Major Scale Patterns

We can build major scales with all the notes on one string as we did in Chapter 6, or with any number of notes per string before ascending to the next string; however, our goal in creating fingering patterns is to minimize position shifts so we can keep better track of where everything is located under our fingers. This will help us solo over chord changes and key changes, and play smooth rhythm parts.

The five patterns of the major scale that we'll construct correspond exactly to the five root shapes. Each scale pattern has three notes per string, except for one spot in each pattern where only two notes are played on a string. The roots are circled so you can immediately see which of Patterns 1 through 5 you are playing. When practicing these patterns, start and stop on the root, but play all the notes you can reach without shifting to a different position.

Exercise #12

Draw major scale patterns on these roots by following the major scale formula. Do not go below the fret marker. Use the smallest amount of position shifting possible. Circle all roots. Label with the pattern numbers.

1) D Major Pattern 1

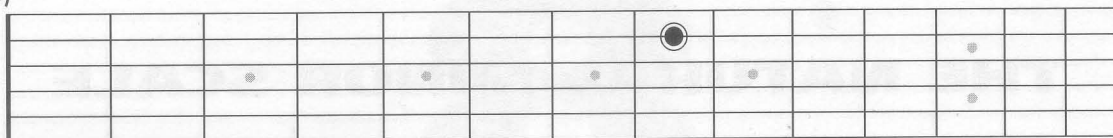
2) G Major Pattern —

3) C Major Pattern —

4) E Major Pattern —

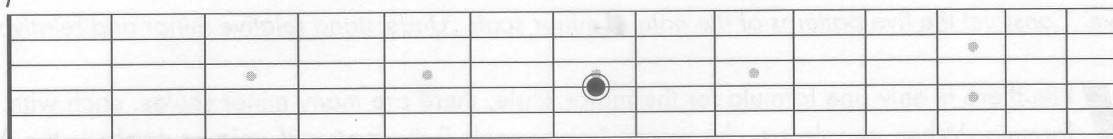
5) Bb Major Pattern —

6) G Major Pattern —



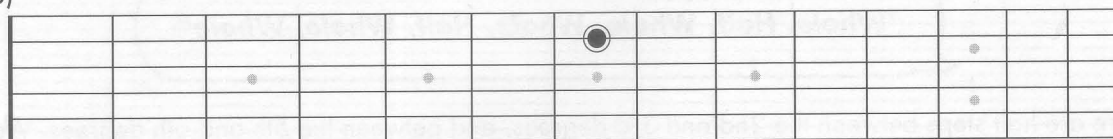
IV

7) A Major Pattern —



IV

8) G \flat Major Pattern —

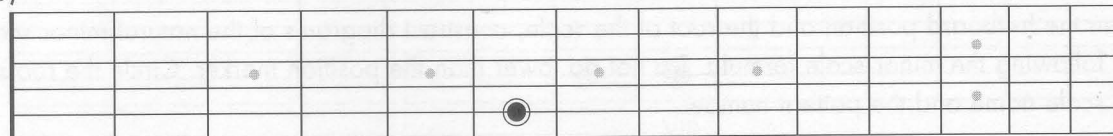


III

9) A \flat Major Pattern —



10) E \flat Major Pattern —



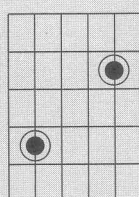
III

Now **play** each pattern. First say aloud the name of the scale and its pattern number. You might also identify each scale degree (1-7) as you play it. Start at the lowest root of the pattern, then play up to the highest note; then go back down to the lowest note before returning to the root.

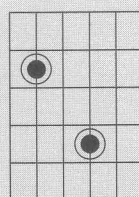
Practice

Here are the five root shapes; build the five major scale patterns around them. Be sure to check your answers by playing through the patterns.

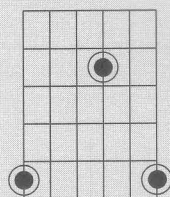
Pattern 1



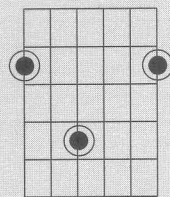
Pattern 2



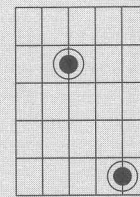
Pattern 3



Pattern 4



Pattern 5



Try picking a root and playing all five patterns as they occur up and down the fretboard. Then try another root, and do the same. Go ahead and explore the guitar using the five patterns.

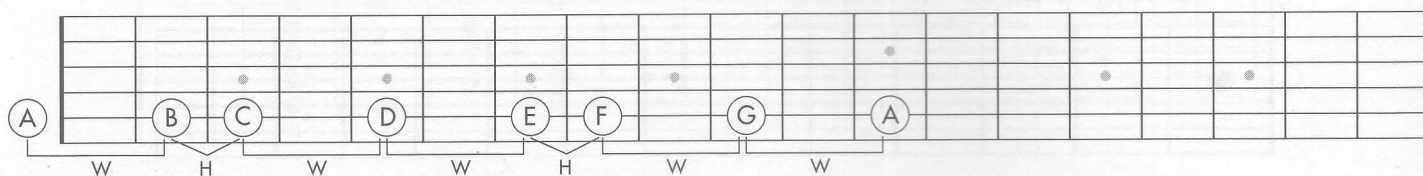
THE NATURAL MINOR SCALE

Objective: Construct the five patterns of the natural minor scale. Understand relative minor and relative major.

While there is only one formula for the major scale, there are many minor scales, each with its own formula. When people say the words "minor scale," the **natural minor scale** is the one you should think of first. Here's the formula (be sure to say it aloud):

"Whole, Half, Whole, Whole, Half, Whole, Whole"

There are half steps between the 2nd and 3rd degrees, and between the 5th and 6th degrees. We write:
1 2[^]3 4 5[^]6 7 8.



Exercise #13

Given the fretboard position and the root of the scale, construct diagrams of the natural minor scale patterns by following the minor scale formula. Do not go lower than the position marker. Circle the roots. Label with the scale name and the pattern number.

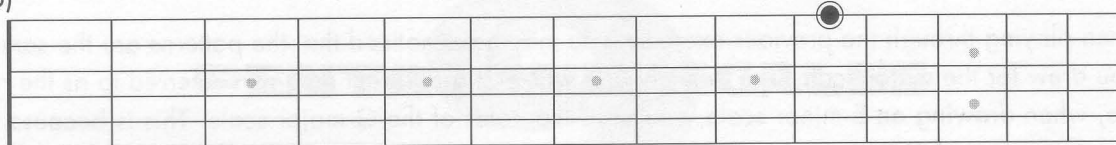
1) E Minor Pattern 5

2) C Minor Pattern

3) E Minor Pattern

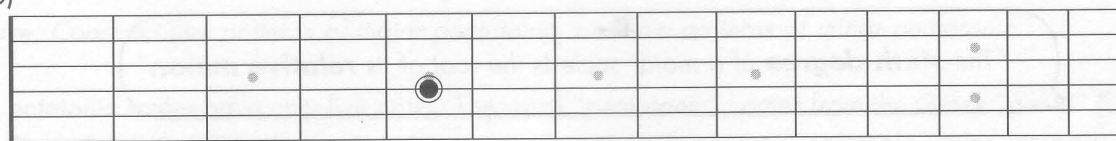
4) Minor Pattern

5) — Minor Pattern —



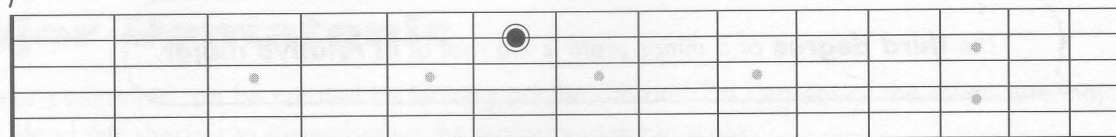
VII

6) — Minor Pattern —



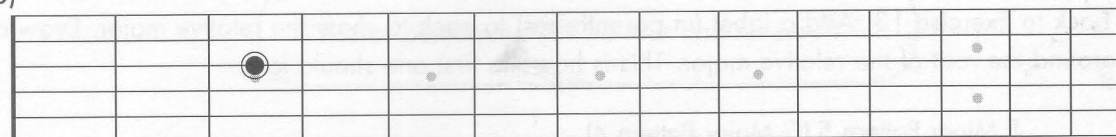
II

7) — Minor Pattern —



V

8) — Minor Pattern —



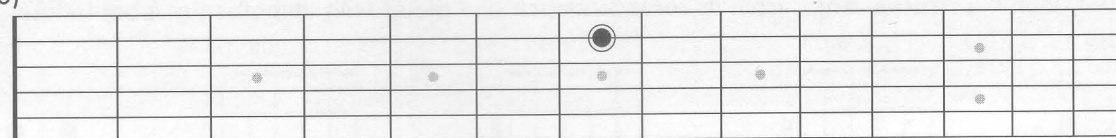
III

9) — Minor Pattern —



VIII

10) — Minor Pattern —



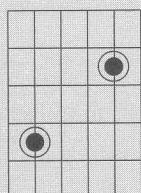
IV

Play through each of the above minor scale patterns. Say aloud the scale name and its pattern number. Once again, play from the lowest root up to the highest note, down to the lowest note, and then back up to the root. If you like, identify each scale degree (1-7) as you play it.

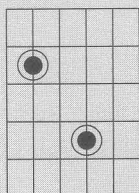
Practice

Here are the five root shapes. Build the five natural minor scale patterns around them as a review. Be sure to check your answers by playing through the patterns.

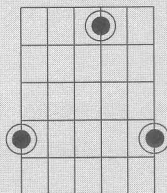
Pattern 1



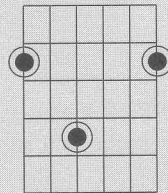
Pattern 2



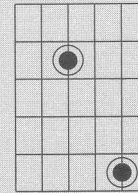
Pattern 3



Pattern 4



Pattern 5



Try picking a root and playing all five patterns as they occur up and down the fretboard. Then try another root, and do the same.

Relative Minor and Major

When playing through the previous exercise, you may have noticed that the patterns are the same as the ones you drew for the major scale. The only change was that a different note was referred to as the root! For instance, when drawing an E minor scale, you used the notes of the G major scale. This is because E minor is the *relative minor* of G major.

This revelation is so important I'd like you to repeat it aloud:

"The **sixth degree** of a major scale is the root of its **relative minor**."

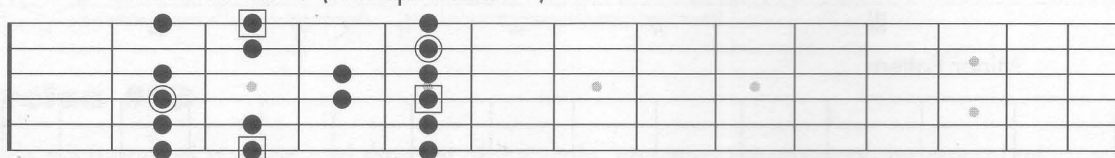
The inverse is also true. G major is the *relative major* of E minor. Let's repeat this aloud, too:

"The **third degree** of a minor scale is the root of its **relative major**."

Exercise #14

Go back to Exercise 13. Add a label (in parentheses) to each to show the relative major. Draw a square around the root of the relative major. This is how the first one should look.

E Minor Pattern 5 (G Major Pattern 4)

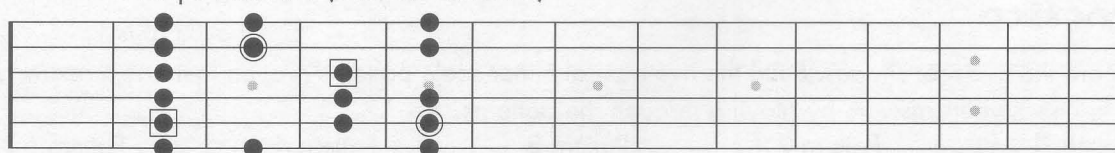


Play through each of the fretboard patterns in Exercise 13 again. First play the natural minor from its root, then the relative major from its root. Say each one aloud with its pattern number before you play it.

Exercise #15

Go back to Exercise 12 (in Chapter 7) and add labels to each pattern to show the relative minor. Draw a square around the root of the relative minor.

D Major Pattern 1 (B Minor Pattern 2)



Play through the fretboard patterns in Exercise 12 again. First play the major from its root, then the relative minor from its root. Say each one aloud with its pattern number before you play it.

PENTATONIC SCALES

Objective: Construct five patterns of major pentatonic, and five patterns of minor pentatonic.

Pentatonic scales have only five notes. The word "pentatonic" comes from the Greek "penta" (five) and "tonos" (tone). With always two notes per string in each pattern, pentatonic scales are easy and fun to play on the guitar. They're the basis for many rock, blues, and country solos.

Major Pentatonic

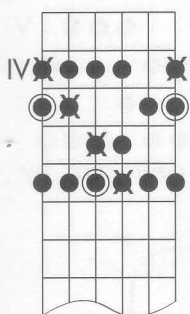
Major pentatonic can be created by leaving out the 4th and 7th degrees of the seven-note major scale. Repeat aloud this shortcut to remembering the major pentatonic scale:

"Major pentatonic has no four and no seven."

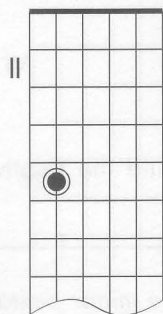
Exercise #16

Draw major scales on the roots provided below. Use the major scale formula from before: whole-whole-half-whole-whole-whole-half (1 2 3[^]4 5 6 7[^]8). Include the 4th and 7th degrees, but then *cross them out* to show which notes are omitted to form the major pentatonic. Circle the roots. Label each diagram by name and pattern number. The first one is done so you can see how they should look.

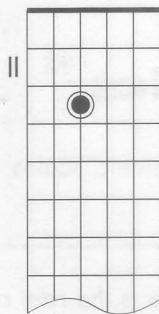
1)
A maj pentatonic
Pattern 4



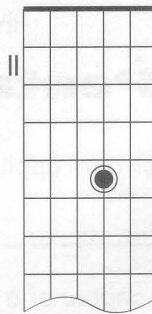
2)
___ maj pent
Pattern ___



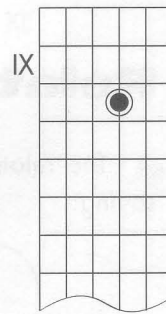
3)
___ maj pent
Pattern ___



4)
___ maj pent
Pattern ___



5)
___ maj pent
Pattern ___



Play each of the diagrams above. First play the major scale pattern, then the major pentatonic scale pattern. Say aloud each scale name and its pattern number.

Minor Pentatonic

To create the minor pentatonic scale, leave out the 2nd and 6th degrees of the natural minor scale. Repeat aloud this shortcut to remembering the minor pentatonic:

"Minor pentatonic has no two and no six."

Exercise #17

Draw natural minor scales on the roots provided below. Use the minor scale formula from before: whole-half-whole-whole-half-whole-whole (1 2[^]3 4 5[^]6 7 8). Cross out the 2nd and 6th degrees to create the minor pentatonic scale. Label each by name and pattern number.

1)
D minor pent
Pattern 2

2)
___ min pent
Pattern ___

3)
___ min pent
Pattern ___

4)
___ min pent
Pattern ___

5)
___ min pent
Pattern ___

Play each diagram above. First play the natural minor scale, then the minor pentatonic scale. Be sure to identify each scale name and its pattern number and say both aloud before you play.

Relative Pentatonics

The relative concept also applies to pentatonic scales. We can find the relative minor pentatonic by saying:

"The sixth degree of a major scale is the root of its relative minor pentatonic."

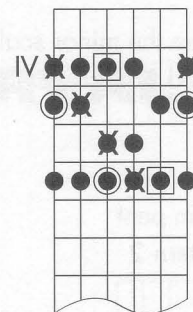
The relative major rule also applies:

"The third degree of the minor scale is the root of the relative major pentatonic."

Exercise #18

Go back to Exercise 16 and write in the name and pattern number of the relative minor pentatonic scale on each. Draw a square around the root of the relative minor pentatonic. The first one will look like this:

A maj pent Pattern 4

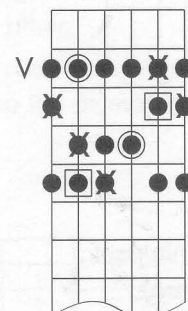


(F# min pent Pattern 5)

Exercise #19

Go back to Exercise 17 and write the name and pattern number of the relative major pentatonic scale for each. Draw a square around the root of the relative major pentatonic. The first one will look like this.

D min pent Pattern 2



(Fmaj pent Pattern 1)

Exercise #20

Use the major scale formula to draw major pentatonic scales based on the roots below. Omit the 4th and 7th degrees. Label each with key and pattern number.

| | | | | |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| 1) Bb maj pent Pattern 4 | 2) ___ maj pent Pattern ___ | 3) ___ maj pent Pattern ___ | 4) ___ maj pent Pattern ___ | 5) ___ maj pent Pattern ___ |
| | | | | |
| 6) ___ maj pent Pattern ___ | 7) ___ maj pent Pattern ___ | 8) ___ maj pent Pattern ___ | 9) ___ maj pent Pattern ___ | 10) ___ maj pent Pattern ___ |
| | | | | |

Exercise #21

Use the minor scale formula to draw minor pentatonic patterns. Omit the 2nd and 6th degrees. Label with key and pattern number.

| | | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|
| 1) D min pent Pattern 2 | 2) ___ min pent Pattern ___ | 3) ___ min pent Pattern ___ | 4) ___ min pent Pattern ___ | 5) ___ min pent Pattern ___ |
| 6) ___ min pent Pattern ___ | 7) ___ min pent Pattern ___ | 8) ___ min pent Pattern ___ | 9) ___ min pent Pattern ___ | 10) ___ min pent Pattern ___ |

Exercise #22

Go back through the previous two exercises (20 and 21) and label each pattern with its relative minor or relative major. Draw a square around the roots of the relative.

Play through the diagrams in the previous exercises. For Exercise 20, play the major pentatonic, then its relative minor. For Exercise 21, play the minor pentatonic, then its relative major. Say aloud the name of each scale, and its pattern number.

MAJOR AND PERFECT INTERVALS

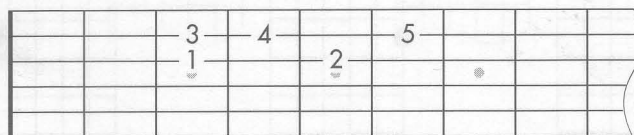
Objective: Recognize major and perfect intervals up to an octave.

An **interval** is the musical distance between two notes. Intervals may be measured from the lower note to the higher note (ascending), or from the higher note down to the lower note (descending). In either case, the name of the interval is the same.

Intervals are described as if the lower note were the root of a major scale. To recognize or find an interval, use the major scale formula (yet again!) to count the distance from one note to the other.

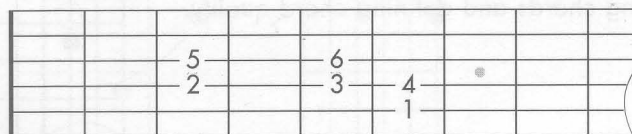
In this example, we find an *ascending fifth* interval from B \flat by counting five steps up the B \flat major scale:

| | | | | |
|-----------|---|---|----------------|---|
| → | | | | |
| W | W | h | W | |
| 1 | 2 | 3 | [^] 4 | 5 |
| B \flat | C | D | E \flat | F |



Here we find a *descending sixth* interval from C by counting backwards, once again using the major scale formula. Call C the 6th degree of the scale and count down. Remember to put a half step between the fourth and third degrees.

| | | | | | |
|-----------|---|---|----------------|-----------|---|
| ← | | | | | |
| W | W | h | W | W | |
| 1 | 2 | 3 | [^] 4 | 5 | 6 |
| E \flat | F | G | A \flat | B \flat | C |



Interval names have two parts: **quantity** and **quality**. Quantity is the number of scale steps in the interval (1, 2, 3, 4, 5, etc.). Quality determines the exact size of the interval and is represented by a name: major, minor, perfect, diminished, or augmented.

The intervals based on the 2nd, 3rd, 6th, and 7th degrees of the major scale are called **major** in quality:

Major Second Major Third Major Sixth Major Seventh

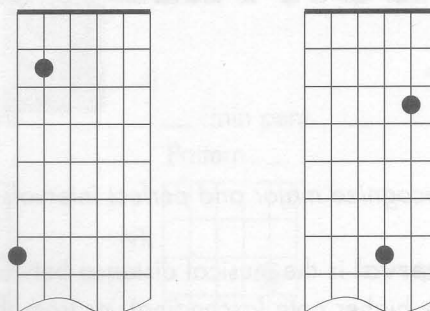
The intervals based on the 1st, 4th, 5th and 8th scale degrees are called **perfect** in quality:

Perfect Unison Perfect Fourth Perfect Fifth Perfect Octave

At first, you should rely on the major scale counting method to identify intervals. Eventually you'll be able to immediately identify any interval by its fretboard shape.

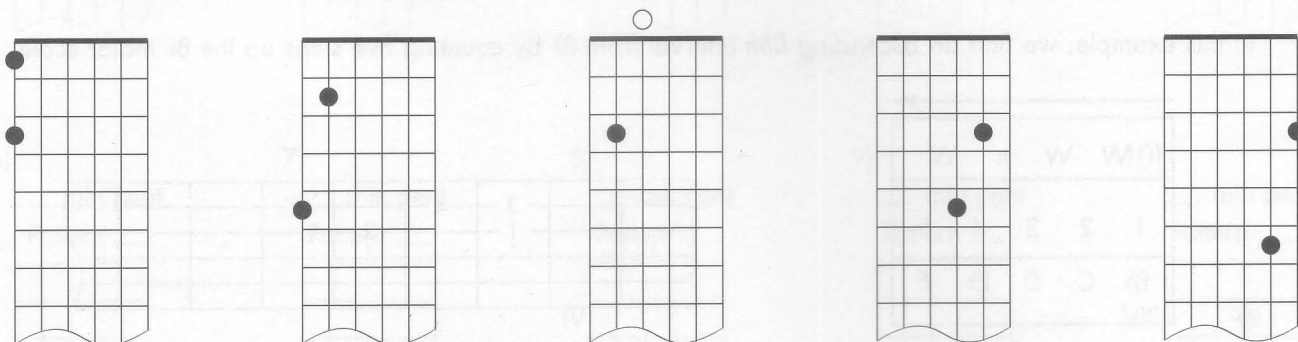
Perfect Unison

Unison is the same note played twice.



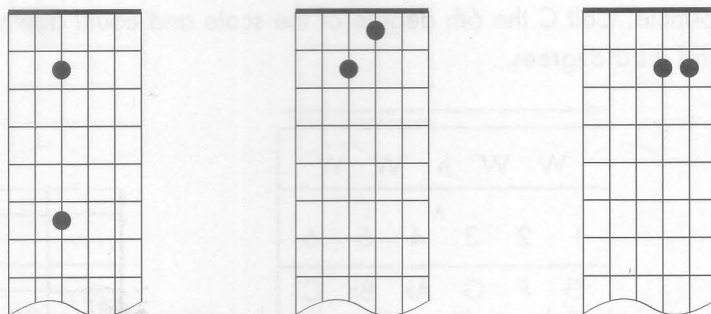
Major Second

The major second interval is the same as a whole step.



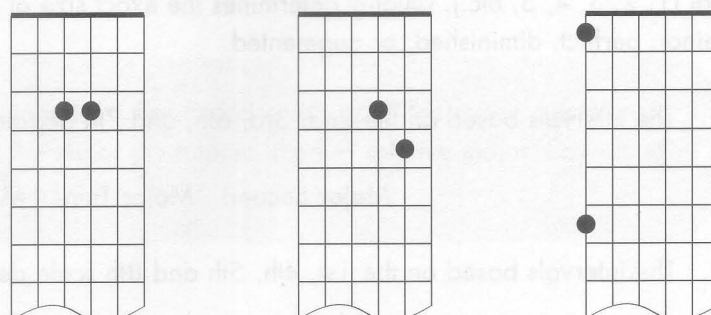
Major Third

The major third interval is the equivalent of two whole steps. It's an important interval in building chords and defining chord quality.



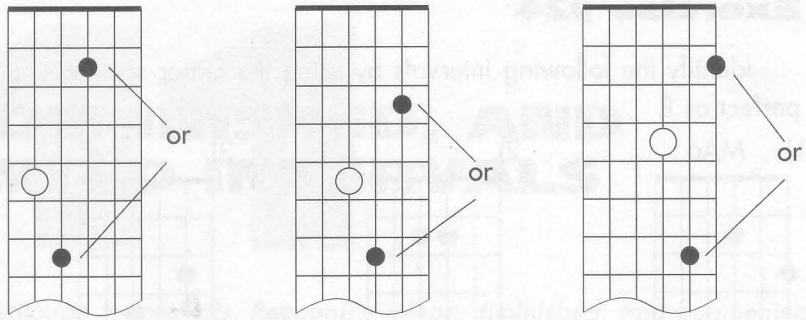
Perfect Fourth

The guitar is tuned in perfect fourths. Each string is a fourth higher than the one below it, except the 2nd string, B, which is tuned a major third higher than the 3rd string, G.

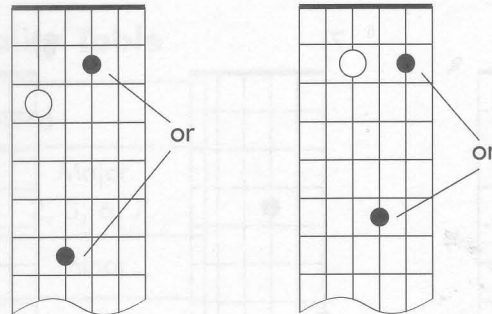


Perfect Fifth

For the perfect fifth interval and anything larger, we need to know how to skip a string. By introducing string skipping, we cross the 2nd string more often, so there are more shapes to learn.

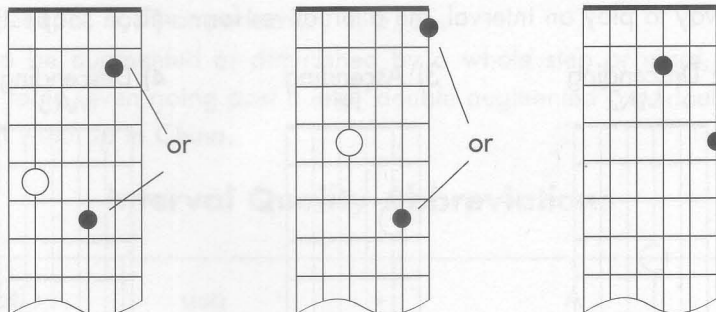


Major Sixth



Major Seventh

It's easiest to identify a major seventh as being one fret smaller than the octave.



Perfect Octave

Octaves are the same as the five root shapes you already learned! If you don't know them yet, go back and review.

Exercise #23

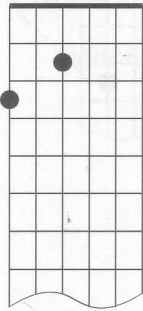
Describe the eight major and perfect intervals in each way they can appear on the fretboard. Here's a description of perfect unison:

Unison is a five-fret distance down the fretboard on adjacent strings. Unison from the third to the second string is a four-fret distance down the fretboard.

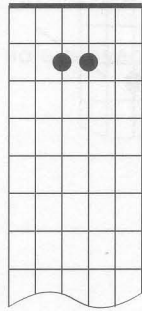
Exercise #24

Identify the following intervals by using the major scale counting method. Abbreviate major as MA and perfect as P.

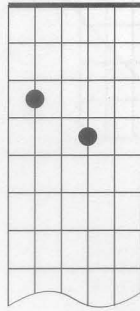
1) MA6



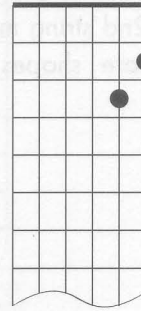
2)



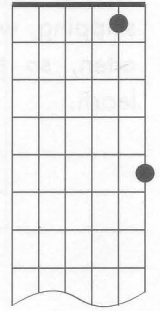
3)



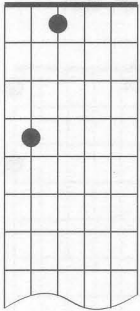
4)



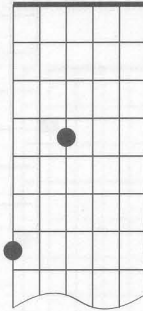
5)



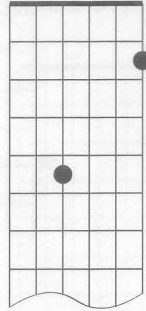
6)



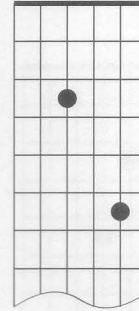
7)



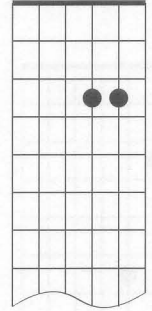
8)



9)



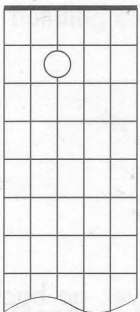
10)



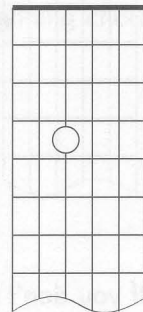
Exercise #25

Draw all possible ways the specified intervals can be played from the starting note. (Notice that, when there is more than one way to play an interval, the alternatives form unison shapes!)

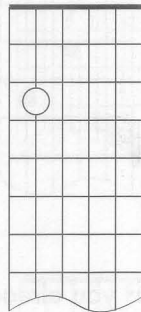
1) Ascending P5



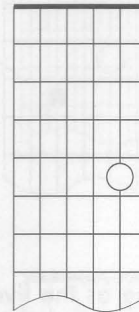
2) Descending MA2



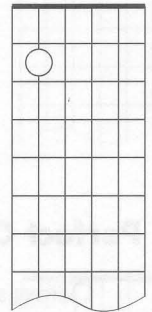
3) Ascending P8



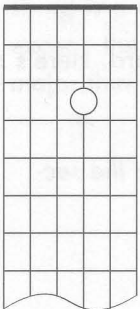
4) Descending MA3



5) Ascending MA6



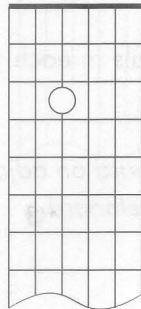
6) Descending P4



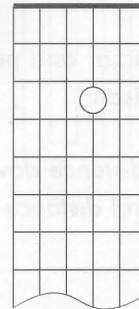
7) Ascending MA7



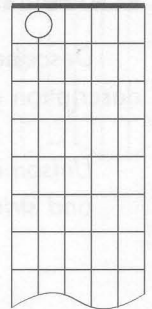
8) Descending P5



9) Ascending MA2



10) Descending MA3



Play through the intervals in the above exercise. Say each interval name aloud as you play and describe how it appears on the fretboard.

MINOR, DIMINISHED, AND AUGMENTED INTERVALS

Objective: Apply diminution and augmentation to intervals. Recognize minor, diminished, and augmented intervals.

Augmentation is the increase in size of an interval. The opposite, **diminution**, is the reduction in size of an interval. As intervals change in size, so do the quality labels that we give them:

Interval Quality Table

| | | |
|-------------------|-----------------------|---------------------|
| Augmentation ↑ | Augmented | |
| | Perfect 1, 4, 5, 8 | Major 2, 3, 6, 7 |
| Diminution ↓ | Diminished | |

As shown above, perfect intervals (1, 4, 5, 8) become either "augmented" or "diminished" in quality when increased or decreased by half step. Major intervals (2, 3, 6, 7) likewise become "augmented" when increased in size, or "minor" when decreased (and then "diminished" if decreased again).

A diminished interval, increased by half step, becomes either minor or perfect, depending on which quantity of interval it is: major (2, 3, 6, 7) or perfect (1, 4, 5, 8).

An interval can also be augmented or diminished by a whole step or more, moving it by the corresponding amount in the table, even going past it into "double augmented" or "double diminished" territory. If you keep going, you'll wind up in China.

Interval Quality Abbreviations

| | | | | |
|------------|-----|---|-------------|------|
| Augmented | aug | + | A | # |
| Perfect | P | ♮ | (no symbol) | |
| Major | MA | ♮ | (no symbol) | |
| Minor | mi | - | b | |
| Diminished | dim | o | D | b bb |

Intervals are used so often in describing chords and scales that they practically have their own language. When describing an interval, the sharp (#) is used instead of "aug", and the flat (b) is often used instead of "mi" or "dim". Perfect and major intervals are implied by no mention of their quality at all. You will see this in chord and scale spellings. For instance, here's a quick way to spell the natural minor scale: 1-2-b3-4-5-b6-b7. When describing intervals, place the symbol before the number, not after.

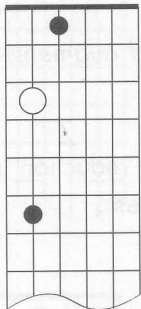
When a perfect (1, 4, 5, or 8) interval becomes diminished, it is often written with one flat (b). When a major (2, 3, 6, 7) interval is diminished by two half steps, it is often written with two flats (bb) instead of "dim" or "o".

The augmented fourth/diminished fifth intervals are also called the **tritone**, abbreviated **TT**. A tritone equals three whole steps.

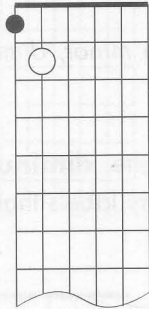
Exercise #26

Draw the indicated intervals above the notes. Start by finding the major or perfect interval and then make the necessary augmentation or diminution. Where it's possible to play the interval more than one way, draw both ways. The first two are done for you.

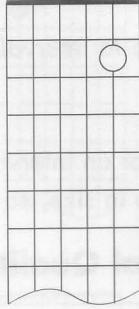
1) Ascending mi3



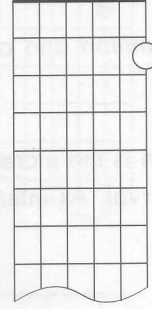
2) Descending dim5



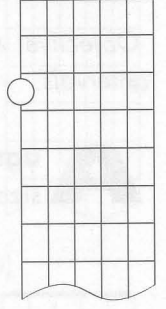
3) Ascending mi6



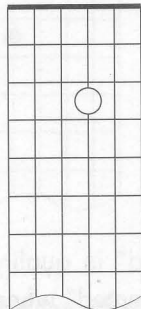
4) Descending mi2



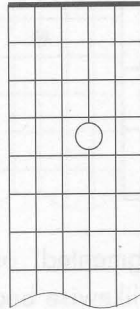
5) Ascending aug2



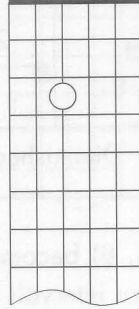
6) Descending mi7



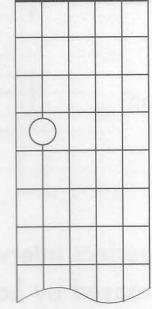
7) Ascending mi7



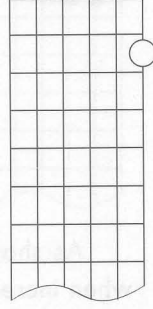
8) Descending mi3



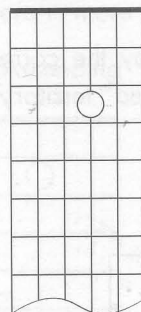
9) Ascending P5



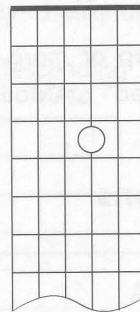
10) Descending MA6



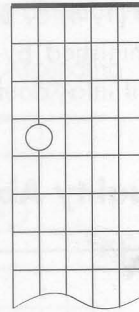
11) Ascending dim7



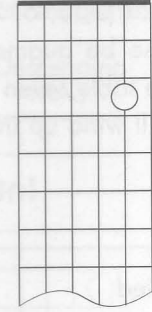
12) Descending aug5



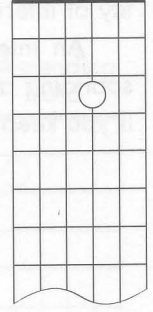
13) Ascending P8



14) Descending dim4



15) Ascending mi3



Play through the above diagrams. Say each interval name aloud as you play it.

Exercise #27

Each interval has multiple possible names; however, only one interval name is correct when the note names are known. Correctly name the following ascending intervals. The first two are done. (Hint: spell the major scale first.)

1. F to C \flat = b5 (F major = F G A B \flat C...)

2. F to B = #4 (F major = F G A B \flat ...)

3. E to A = _____ (E major = E F \sharp G \sharp A...)

4. G to B \flat = _____

5. B \flat to D \flat = _____

6. C \sharp to E = _____

7. C to B $\flat\flat$ = _____

8. D to C = _____

9. A to G = _____

10. E \flat to B = _____

11. F \sharp to D = _____

12. A \flat to C = _____

13. B to F = _____

14. G \flat to A = _____

15. D to B \flat = _____

12 COMPOUND INTERVALS

Objective: Recognize and construct compound intervals.

Compound intervals are intervals larger than an octave. These intervals share the quality of their counterparts in the lower octave, which can be called **simple intervals**.

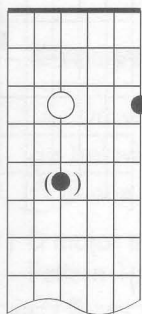
Compound Intervals and Their Simple Interval Equivalents

| Major | | Perfect | |
|--------------|--|--------------|--|
| 9th 10th | 2nd plus an octave 3rd plus an octave | 11th 12th | 4th plus an octave 5th plus an octave |
| 13th 14th | 6th plus an octave 7th plus an octave | 15th | Two octaves |

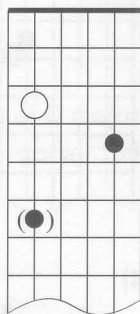
As described in Chapter 11, we often use sharp and flat symbols instead of "aug", "mi", and "dim" when writing these intervals. "Ma" or "P" is implied by the lack of a symbol.

To construct compound intervals, add an octave to the simple interval as shown in the table above. For example, a ninth above F is the same as a second above F, plus an octave.

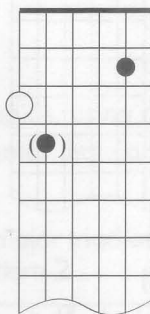
$$9 = 2 + \text{octave}$$



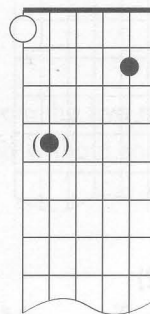
$$\flat 10 = \flat 3 + \text{octave}$$



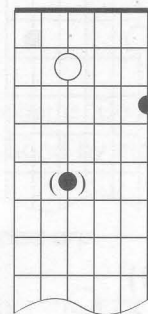
$$\sharp 11 = \sharp 4 + \text{octave}$$



$$\flat 13 = \flat 6 + \text{octave}$$



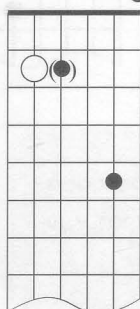
$$\sharp 9 = \sharp 2 + \text{octave}$$



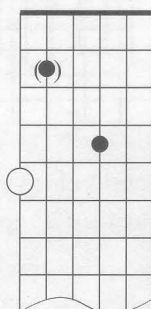
Exercise #28

Construct the compound intervals indicated above these notes. Write the simple interval first (in parentheses), then the octave.

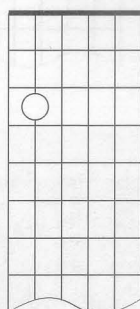
11



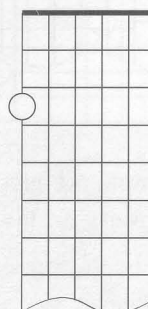
9



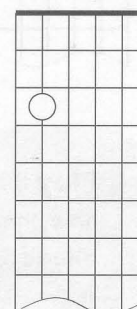
13



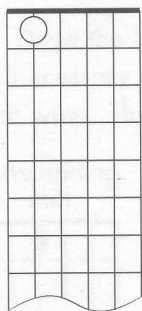
$\flat 13$



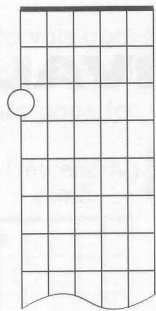
$\sharp 11$



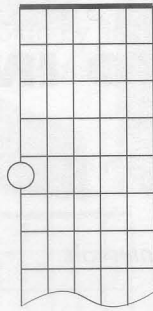
#9



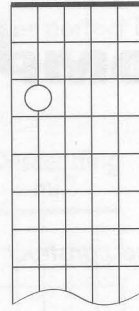
b9



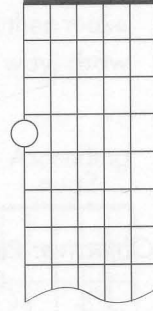
13



b13



#11

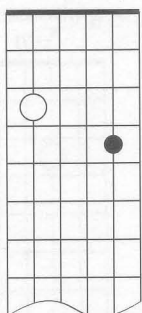


Exercise #29

Name the following compound intervals.

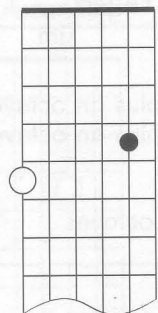
1)

C D#



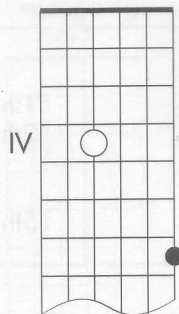
2)

A D#



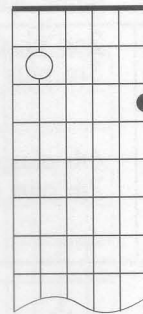
3)

F# B



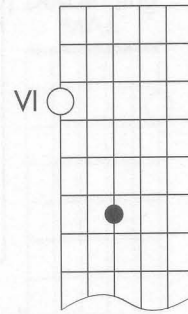
4)

B G



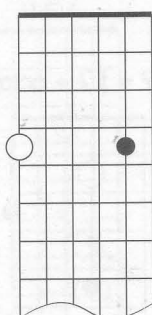
5)

Bb Cb



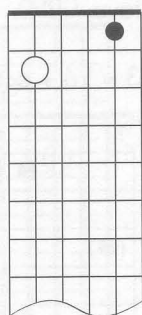
6)

Ab Eb



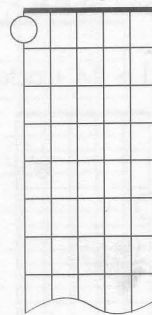
7)

B C



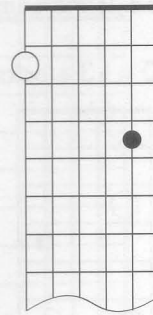
8)

F G



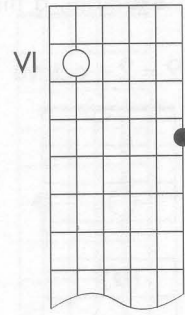
9)

F# D#



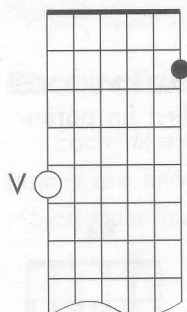
10)

Eb C



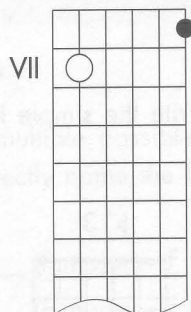
11)

A F#



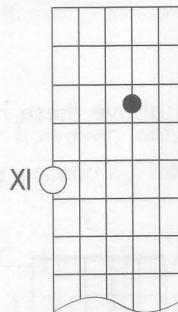
12)

E A#



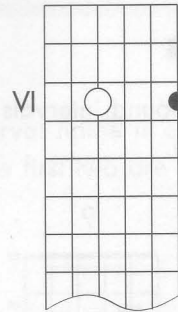
13)

Eb Fb



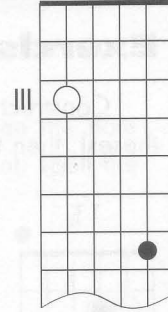
14)

Ab Bb



15)

C F#



Play through the compound intervals in this chapter. Say each one aloud before you play it. Describe how the interval appears on the fretboard, or identify its relationship to a simple interval that you already know.

13 TRIAD ARPEGGIOS

Objective: Construct triad arpeggios on the fretboard.

A chord is two or more notes sounding at the same time. An **arpeggio** is the notes of a chord played in sequence instead of at the same time. Arpeggios are easier to create on the fretboard than chords, so we'll spell them first. In the next chapter, we'll create the chord shapes that use the same notes.

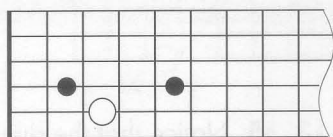
The most basic arpeggio (and chord) is the triad. A **triad** consists of three notes: a root, third, and fifth. These notes can be repeated in different octaves to provide complete arpeggio shapes for Patterns 1 through 5.

Don't try to memorize all the shapes in one day! Start by memorizing the spellings as shown in boldface by repeating them aloud. Then draw the shapes by using the intervals in the spelling.

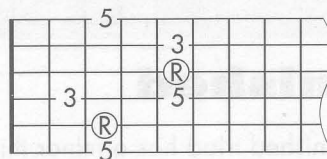
Major

The major triad has a root and the intervals of a major third and a perfect fifth: **1, 3, 5**. They're the same as degrees 1, 3, and 5 of the major scale. We repeat these three notes (in different octaves) to complete Pattern 2 of a C major triad arpeggio.

C Major Arpeggio



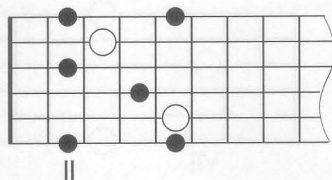
C Major Arpeggio, Pattern 2



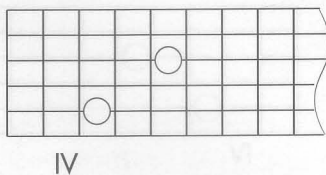
Exercise #30

Draw five patterns of D major triad arpeggios, using only notes from the five major scale patterns. Do not go below the position marker, but draw all notes that can be reached without shifting the left hand by more than one fret.

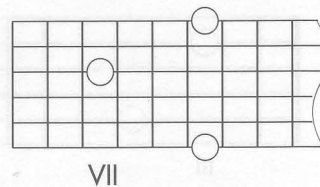
1) D major triad arp
Pattern 1



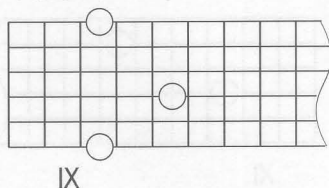
2) D major triad arp
Pattern 2



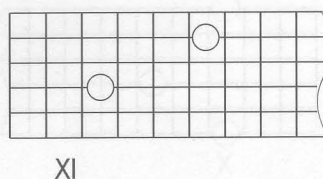
3) D major triad arp
Pattern 3



4) D major triad arp
Pattern 4



5) D major triad arp
Pattern 5



Now **play** the D major arpeggio shapes above. Say each pattern number aloud before you play it. As with scale patterns, play each arpeggio shape from the lowest root up to the highest note, then down to the lowest note and back up to the root. Be sure to listen to the distinctly major quality of the arpeggio.

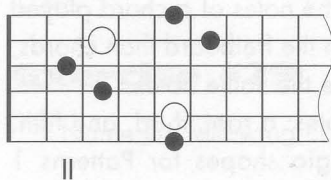
Minor

The minor triad has a minor third and a perfect fifth above the root: **1, \flat 3, 5**.

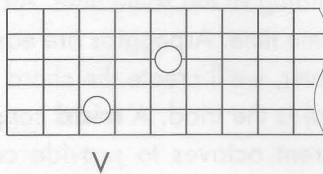
Exercise #31

Draw five patterns of D minor triad arpeggios. Do not go below the position marker, but draw all notes that can be reached without shifting the left hand by more than one fret.

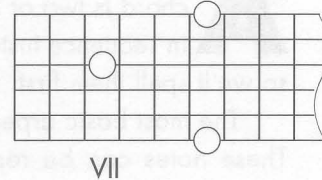
1) D minor triad arp
Pattern 1



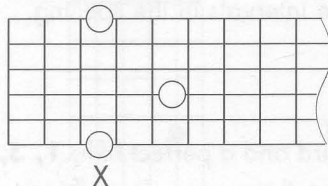
2) D minor triad arp
Pattern 2



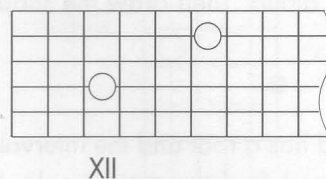
3) D minor triad arp
Pattern 3



4) D minor triad arp
Pattern 4



5) D minor triad arp
Pattern 5



Now **play** each D minor arpeggio shape above. Say each pattern number aloud before you play it, and listen for the distinctly minor sound.

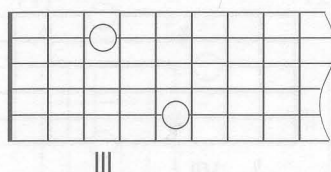
Diminished

The diminished triad has a minor third and a diminished fifth: **1, \flat 3, \flat 5**. Notice that the diminished triad contains two minor thirds in a row.

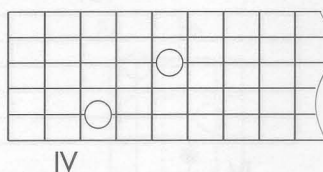
Exercise #32

Draw D diminished triad arpeggios for each of the five root shapes. Do not go below the position marker, but draw all notes that can be reached without shifting the left hand by more than one fret. Some possible shapes may skip a string. That's OK.

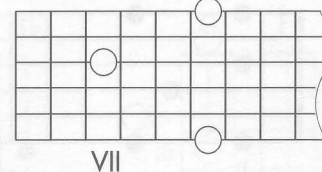
1) D dim triad arp
Pattern 1



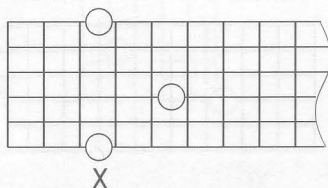
2) D dim triad arp
Pattern 2



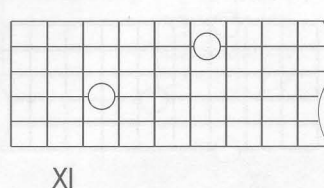
3) D dim triad arp
Pattern 3



4) D dim triad arp
Pattern 4



5) D dim triad arp
Pattern 5



Once again, **play** each D diminished arpeggio shape above. Say each pattern number aloud before you play it, and listen for the distinctly diminished quality.

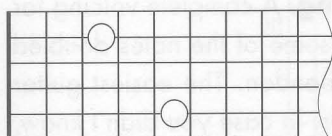
Augmented

The augmented triad has a major third and an augmented fifth: **1, 3, #5**. Notice that this triad consists of two major thirds in a row. Also notice that the interval between the #5 and the next root, a diminished fourth, is equivalent to a major third. This makes for a **symmetrical** construction, resulting in repeating patterns on the fretboard, so that any note can be considered the root.

Exercise #33

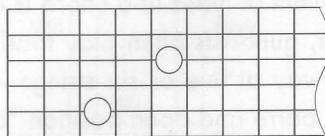
Draw D augmented triad arpeggios for each of the five root shapes. (Don't circle every note, smart guy!) When constructing augmented arpeggios, you may find two possible places within a pattern to play some of the notes. Both are correct.

1) D aug triad arp
Pattern 1



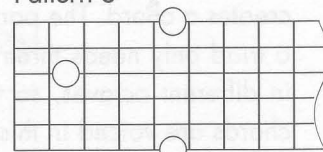
II

2) D aug triad arp
Pattern 2



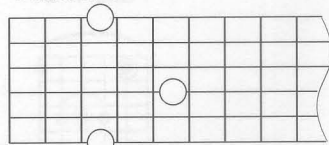
IV

3) D aug triad arp
Pattern 3



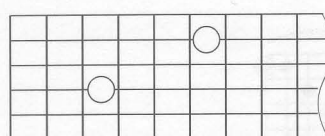
VII

4) D aug triad arp
Pattern 4



IX

5) D aug triad arp
Pattern 5



XI

Play each D augmented arpeggio shape above. Say each pattern number aloud before you play it. Listen to hear the distinctly augmented quality.

14 TRIADS

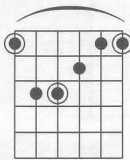
Objective: Construct close voiced triads on the fretboard. Play all inversions of close voiced triads.

Whereas arpeggios are played one note at a time, **chords** are strummed or plucked simultaneously. An arpeggio may have two notes on one string, but a chord may not, because a string can only produce one note at a time. That's why we worked on arpeggios first, and now chords. Chords are just a little harder.

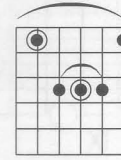
By finding the notes of an arpeggio on different strings, we can strum or pluck them together. Doing so creates a chord. The particular arrangement of notes in a chord is called its **voicing**. A complete voicing for a triad only needs three notes; however, guitarists often play triad voicings with some of the notes doubled in different octaves, so they can flail away at five or six strings with reckless abandon. The easiest guitar chords are voiced in this manner: basic barre and open position "cowboy" chords. In case you didn't know, these familiar chords are triads.

Major Triad Barre Chord Voicings

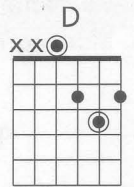
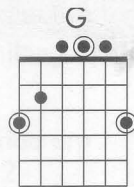
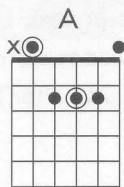
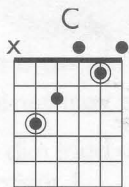
Pattern 4



Pattern 2



Open Position Major Triad Chord Voicings ("Cowboy Chords")



Now we'll build six-string patterns of successive **close voiced triads** that are somewhat similar to the arpeggio shapes we studied, but fit the requirement of having one note per string. In a close voiced triad, the root can only be followed by the third, which can only be followed by the fifth, then another root in the next octave, then the third again, and so on.

1 3 5 1 3 5 1 ...

When we create these diagrams, we will see three basic shapes that repeat to cover the entire fretboard: one based on each note of the triad when starting from the sixth string. Don't expect to be able to play all six strings of these shapes at once. We will divide each of them into four small three-string shapes when we play them.

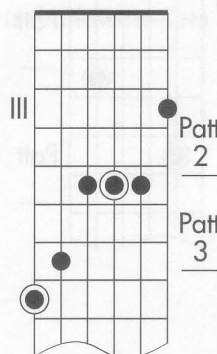
Major Triad

A **major triad** consists of a root, major third, and perfect fifth: **1, 3, 5**. Major triad symbols can look like any of these: A^bmaj, A^bma, A^bMa, A^b.

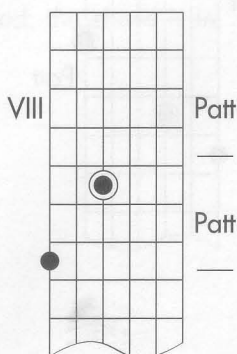
Exercise #34

Complete the close voiced major triads below. Circle the roots and label each pattern number. When one of these six-string triad shapes crosses between two patterns, label both.

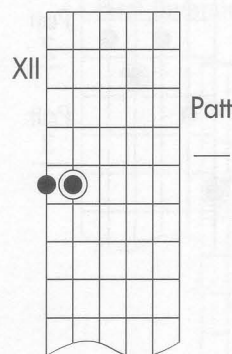
1) C major triad



2) C major triad



3) C major triad



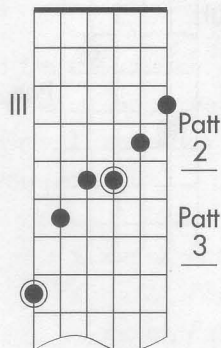
Minor Triad

A **minor triad** has a root, minor third, and perfect fifth: **1, b3, 5**. Minor triad symbols can look like any of these: A^bmin, A^bmi, A^bMi, A^b-, A^bm.

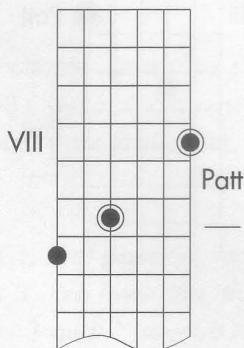
Exercise #35

Complete the close voiced C minor triads shown below. All roots are circled. Label each pattern number.

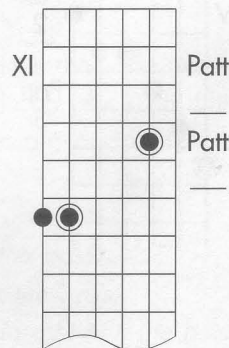
1) C minor triad



2) C min triad



3) C min triad



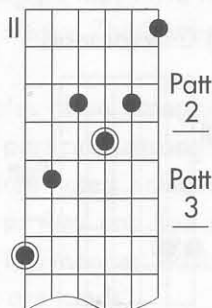
Diminished Triad

A diminished triad consists of a root, minor third, and a diminished fifth: **1, $\flat 3$, $\flat 5$** . Diminished triads are written with the word "dim" or with a little circle: $A\flat dim$, $A\flat^\circ$.

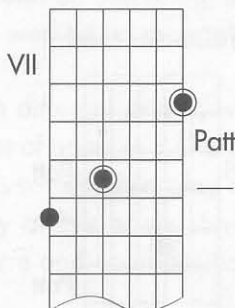
Exercise #36

Complete the close voiced C diminished triads shown below. All roots are circled. Label each pattern number.

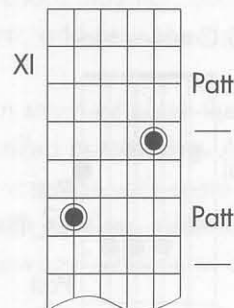
1) C dim triad



2) C dim triad



3) C dim triad



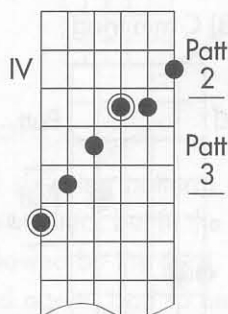
Augmented Triad

An augmented triad consists of a root, major third, and an augmented fifth: **1, 3, $\sharp 5$** . The augmented triad has the same symmetrical properties as its arpeggio. Augmented triad symbols use the word "aug" or a plus sign: $A\sharp aug$, $A\sharp^+$.

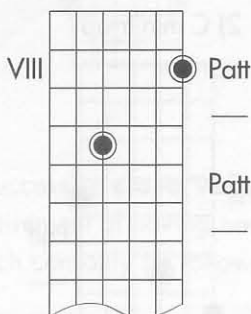
Exercise #37

Draw close voiced C augmented triads on the roots shown below. Actually they're all possible roots, and they're all patterns 1, 3, or 5, crossing into patterns 2 or 4.

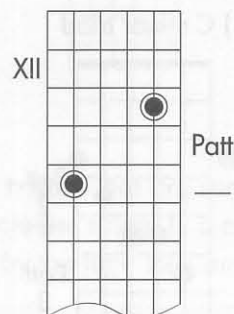
1) C aug triad



2) C aug triad



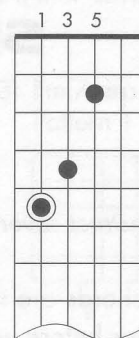
3) C aug triad



Inversions

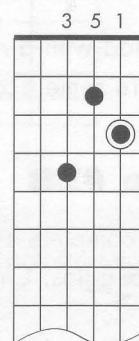
When its *root* is the lowest note played, a chord is said to be in **root position**.

Root Position D major triad



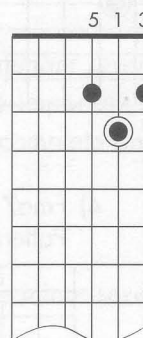
When its *third* is the lowest note played, the chord is in **first inversion**.

First Inversion D major triad



When its *fifth* is the lowest note played, the chord is in **second inversion**.

Second Inversion D major triad



Practice

Go back to the exercises in this chapter and play them in three-note inversions like the ones shown above. For each shape, you will play four voicings, starting on the sixth, fifth, fourth, and third strings, respectively. Name each chord, pattern number, inversion, and which is the lowest (bass) note aloud as you play.

"C major, Pattern 3, root position, root in the bass..."

C major, Pattern 3, first inversion, third in the bass..."

C major, Patterns 3 and 2, second inversion, fifth in the bass..."

C major, Pattern 2, root position, root in the bass!"

15 SEVENTH ARPEGGIOS

Objective: Construct seventh arpeggios on the fretboard.

Seventh chords are the next step up from triads. They contain four notes. Once again, we'll work with arpeggios before we explore seventh chords themselves. The basic intervallic construction is the same.

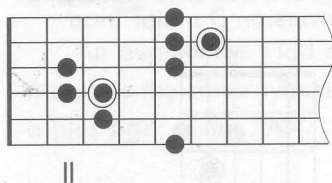
Major Seventh

A major triad with a major seventh added to it is called a *major seventh* chord. The notes are **1, 3, 5,** and **7**. Here are some acceptable symbols for major seventh chords: Cmaj7, Cma7, C Δ 7.

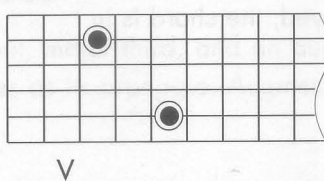
Exercise #38

Draw five complete six-string shapes for F major seventh arpeggios by adding the major seventh to F major triad arpeggios. Circle the roots.

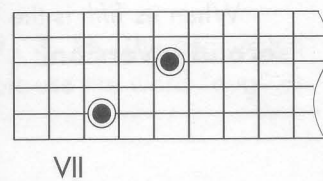
1) Fma7 arp
Pattern 5



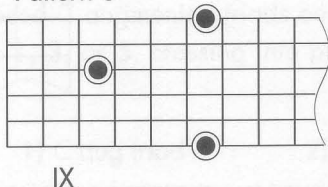
2) Fma7 arp
Pattern 1



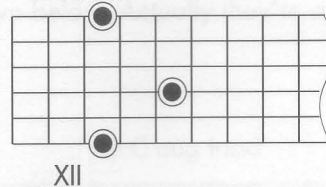
3) Fma7 arp
Pattern 2



4) Fma7 arp
Pattern 3



5) Fma7 arp
Pattern 4



Play through each of the F major seventh arpeggio patterns above. Say each pattern number aloud before you play. Listen for the distinct sound of the major seventh.

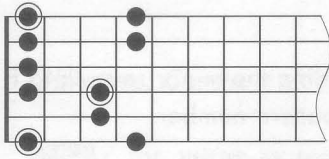
Minor Seventh

When a minor triad has a minor seventh added, it's called a *minor seventh* chord. The notes are **1, \flat 3,** **5,** and **\flat 7**. These are correct symbols for minor seventh chords: Cmin7, Cmi7, C-7.

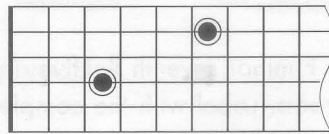
Exercise #39

Draw complete six-string shapes for F minor seventh arpeggios by adding the minor seventh to F minor triad arpeggios. Circle the roots.

1) Fmi7 arp
Pattern 4

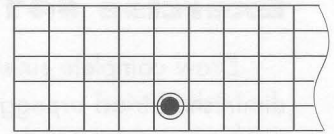


2) Fmi7 arp
Pattern 5



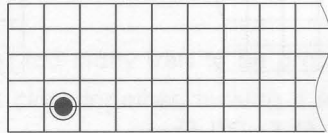
III

3) Fmi7 arp
Pattern 1



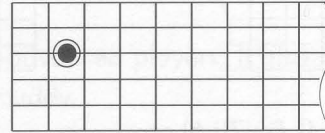
V

4) Fmi7 arp
Pattern 2



VIII

5) Fmi7 arp
Pattern 3



X

Play through each of the F minor seventh arpeggio shapes above. Say each pattern number aloud before you play it. Listen for the distinct sound of the minor seventh.

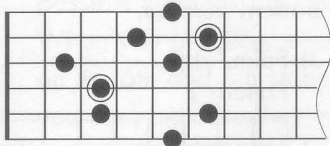
Dominant Seventh

When a major triad has a minor seventh added to it, the result is called a *dominant seventh* chord. The notes of a dominant seventh are **1, 3, 5,** and **b7**. The correct symbol for this very important sonority is just the chord letter followed by the number 7. The dominant quality is *implied* by the complete and utter lack of any other symbol: C7, C⁷.

Exercise #40

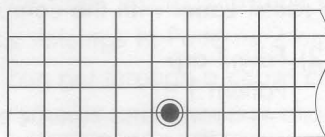
Draw complete six-string shapes for F dominant seventh arpeggios by adding the minor seventh to F major triad arpeggios. Circle the roots.

1) F7 arp
Pattern 5



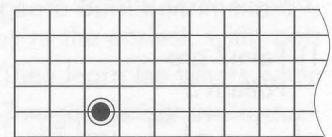
II

2) F7 arp
Pattern 1



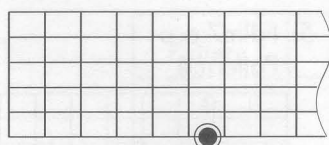
V

3) F7 arp
Pattern 2



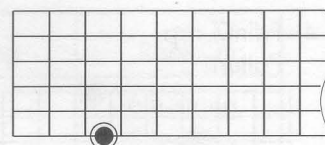
VII

4) F7 arp
Pattern 3



X

5) F7 arp
Pattern 4



XII

Play each of the F dominant seventh arpeggio shapes above. Say each pattern number aloud before you play it. Listen for the distinct sound of the dominant seventh.

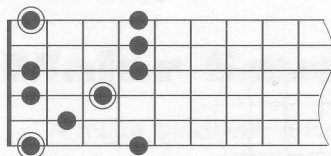
Minor Seventh Flat-Five

When a diminished triad has a minor seventh added to it, the result is a *minor seventh flat-five* chord. Another popular name for this chord is *half-diminished seventh*. The notes are **1**, **b3**, **b5**, and **b7**. Minor seventh flat-five chord symbols can be spelled like this: Bbm7(b5), Bbm7b5, Bb-7b5, Bb°7.

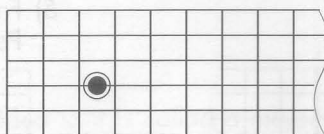
Exercise #41

Draw complete six-string shapes for F minor seventh flat-five arpeggios by adding the minor seventh to F diminished triad arpeggios. Circle the roots. Label with the complete name and pattern number.

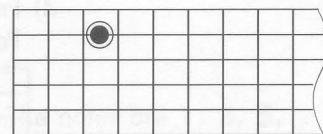
- 1) Fmi7(b5) arp
Pattern 4



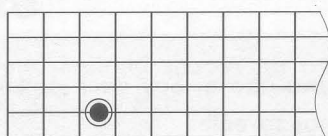
- 2) Fmi7(b5) arp
Pattern 5



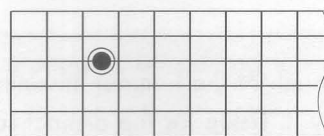
- 3) Fmi7(b5) arp
Pattern 1



- 4) Fmi7(b5) arp
Pattern 2



- 5) Fmi7(b5) arp
Pattern 3



Play each of the F minor seventh flat-five arpeggio shapes above. Say each pattern number aloud before you play it. Listen for the distinct sound of the minor seventh flat-five.

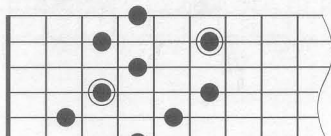
Diminished Seventh

When a diminished triad has a diminished seventh added to it, the result is a *diminished seventh* chord. The notes are **1**, **b3**, **b5**, and **bb7**. The diminished seventh arpeggio is a symmetrical construction, repeating fret-board shapes with all notes separated by minor thirds. Common spellings are: Cdim7, C°7.

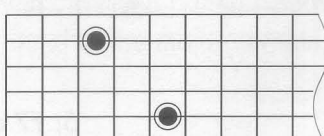
Exercise #42

Draw complete six-string shapes for F diminished seventh arpeggios by adding the diminished seventh to F diminished triad arpeggios. Circle the roots. Label with the complete name and pattern number.

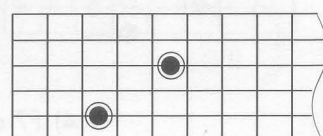
- 1) Fdim7 arp
Pattern 5



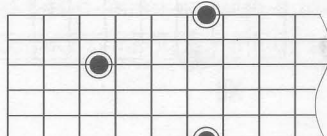
- 2) Fdim7 arp
Pattern 1



- 3) Fdim7 arp
Pattern 2



- 4) Fdim7 arp
Pattern 3



- 5) Fdim7 arp
Pattern 4



Play each of the F diminished seventh arpeggio shapes above. Say each pattern number aloud before you play it. Listen for the distinct sound of the diminished seventh.

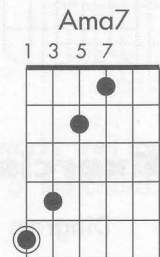
16 SEVENTH CHORDS

Objective: Construct stock seventh chord voicings.

So far, we've learned chords in close voicings. However, triads and seventh chords often sound better and are easier to play in **open voicings**.

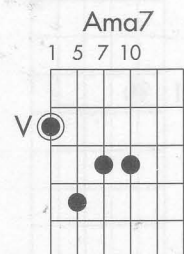
In fact, seventh chords are sometimes physically unplayable in close voicings on the guitar. Our fingers can't always reach all the notes. For instance, look at this close voiced Amaj7 chord.

The chord spans too many frets to be practical to all but advanced players. It also has too many low notes close together, making it sound dark or muddy.



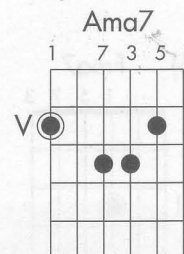
To find more useful voicings for any chord, *raise or lower one or more notes by an octave*. Doing so creates an open voicing. Let's try it. The notes of the close voiced A major seventh chord are 1-3-5-7. If we raise its third by an octave, we get a tenth: 1-5-7-10. The chord is now open voiced because the notes are no longer as close together in pitch as possible. On the fretboard, we can play the Amaj7 chord with a fifth interval, which shifts us up to Pattern 4.

Since the 10th and 3rd create the same quality of chord, we'll call this voicing 1-5-7-3 for easy recognition of the chord tones. We'll refer to all notes by their original quantities even if we move them by an octave.



The fifth interval on the bottom two strings still makes this chord a bit dark in sound. If we raise the fifth degree by an octave, we get 1-7-10-12. We call this **1-7-3-5**.

Strumming this voicing requires the fretting hand's first finger to do two jobs: 1) hold down the root on the sixth string, *and* 2) damp the fifth string. If you are plucking the chord with your fingers instead of strumming it, don't pluck the fifth string.



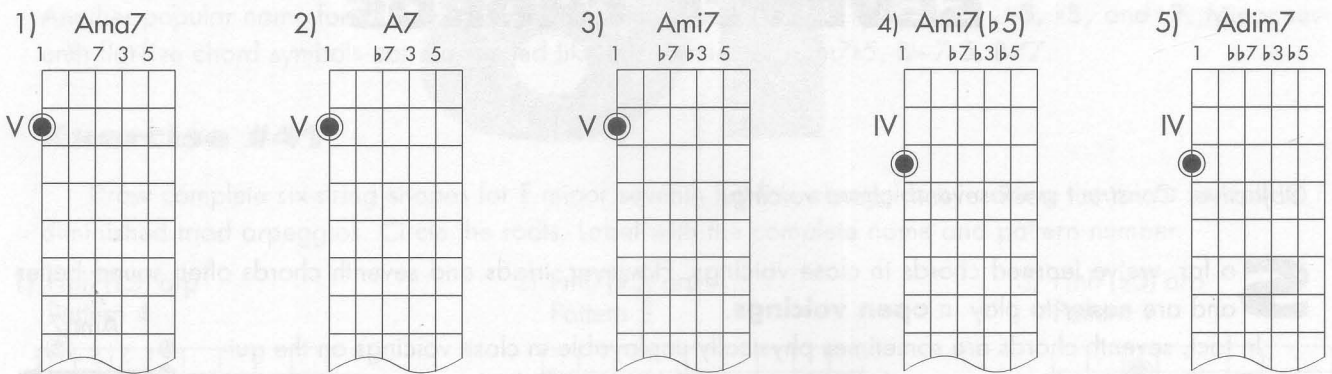
1-7-3-5 is a **stock voicing** for Pattern 4 ma7, mi7, dom7, mi7(b5), and dim7 chords. There are many possible voicings for these chords, but the stock voicings are the ones you want to be able to grab quickly. When you practice, emphasize the stock voicings in Patterns 2 and 4 at first—they're the easiest, with roots on the 6th and 5th strings—so that you can get through a chord chart of a song. Then learn the others when you can, because they create some nice sounds and smoother chord movements. The goal is to have a stock voicing ready to play for each chord type in all five patterns.

Stock Seventh Chord Voicing Table

| Pattern | Stock Voicing | Root On: |
|---------|---------------|------------|
| 4 | 1-7-3-5 | 6th string |
| 2 | 1-5-7-3 | 5th string |
| 5 | 1-5-7-3 | 4th string |
| 3 | 5-1-3-7 | 3rd string |
| 1 | 3-7-1-5 | 2nd string |

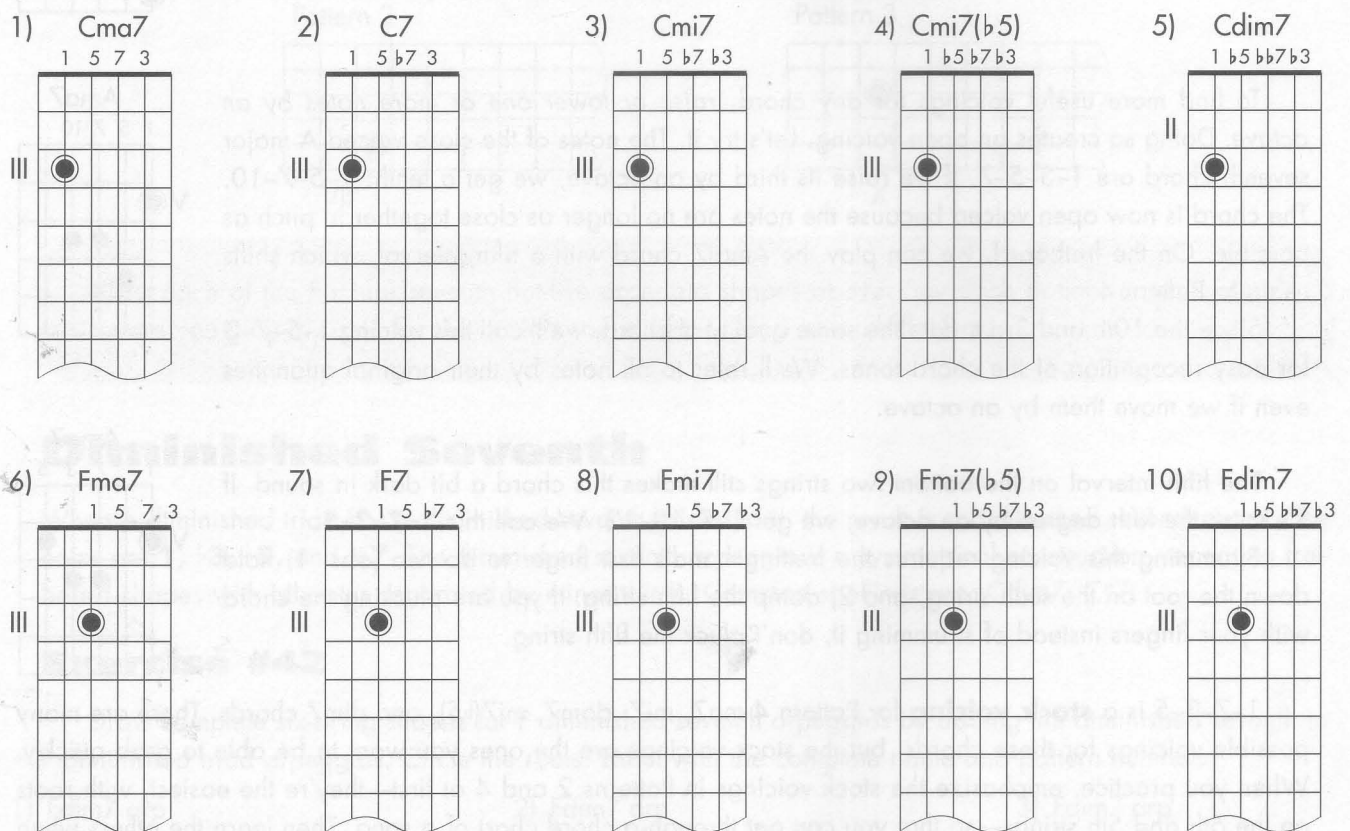
Exercise #43

Diagram 1-7-3-5 stock voicings of seventh chords using Pattern 4.



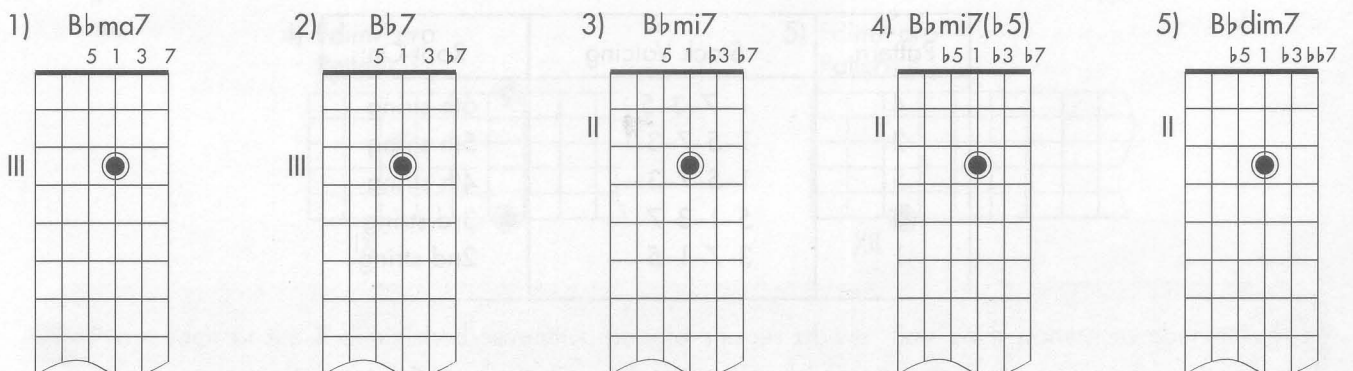
Exercise #44

Diagram 1-5-7-3 stock voicings of seventh chords using Patterns 2 and 5.



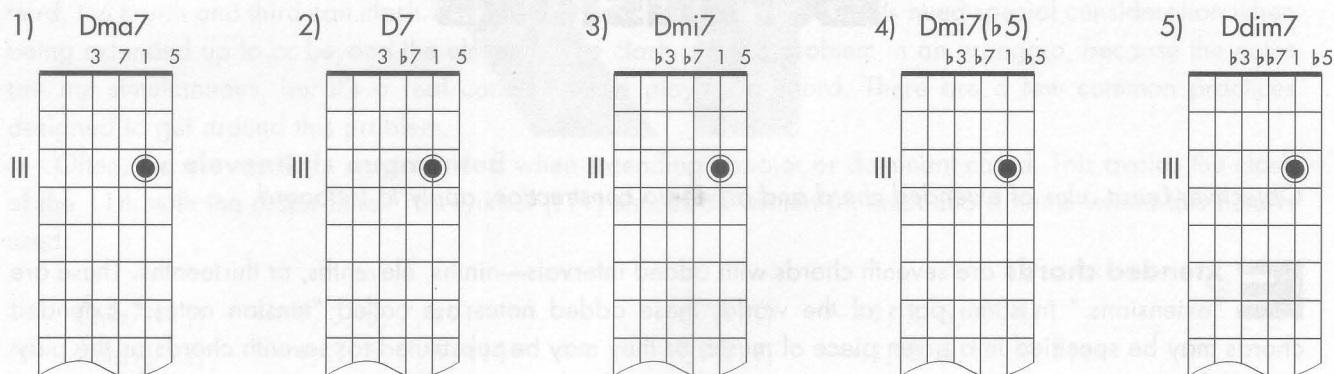
Exercise #45

Diagram 5-1-3-7 stock voicings for seventh chords in Pattern 3.



Exercise #46

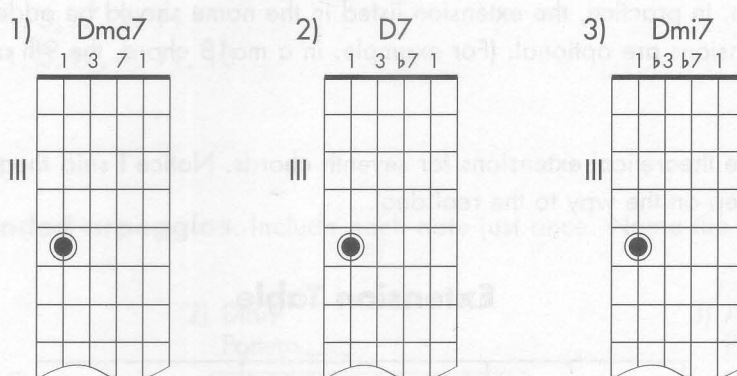
Diagram 3-7-1-5 stock voicings for seventh chords in Pattern 1.



A few more stock voicings for Pattern 1 **leave out the fifth** and include an octave. This works well for all basic chord types except $\text{mi}7(\flat 5)$ or $\text{dim}7$, where the $\flat 5$ is necessary to establish the quality of the chord. One example is the 1-3-7-1 voicing.

Exercise #47

Diagram 1-3-7-1 stock voicings for seventh chords in Pattern 1. Circle the roots.



Practice

Be sure to play through all the stock voicings in this chapter. Again, focus on the voicings in Patterns 4 and 2 at first.

Then try the following: Pick a chord type (e.g., $\text{ma}7$) and a root note (e.g., C), and play all the stock voicings for that chord through each pattern, from low to high on the neck. As you play, say aloud the chord name, pattern number, and stock voicing, like this:

"C major seventh, Pattern 1, 1-3-7-1...
 C major seventh, Pattern 1, 3-7-1-5...
 C major seventh, Pattern 2, 1-5-7-3...
 C major seventh, Pattern 3, 5-1-3-7...
 C major seventh, Pattern 4, 1-7-3-5...
 C major seventh, Pattern 5, 1-5-7-3"

Pick another chord type (or another root) and repeat this exercise.

17 EXTENSIONS

Objective: Learn rules of extended chord and arpeggio construction; apply to fretboard.

Extended chords are seventh chords with added intervals—ninth, eleventh, or thirteenth. These are “extensions.” In some parts of the world, these added notes are called “tension notes.” Extended chords may be specified in a given piece of music, or they may be substituted for seventh chords as the player sees fit.

We’ll just use the word “chord” here, but the following rules apply to both chords and arpeggios:

- When extending a seventh chord, the basic quality of the chord does not change.
- Extend any ma7, dom7, mi7, or mi7(b5) chord by adding 9, 11, or 13 to the name. Diminished seventh chords are usually not extended.
- The extensions are always major or perfect, unless otherwise stated in the chord name.
- All extensions up to and including the one stated in the chord name are included, though sometimes this is impossible because it exceeds the six-note limit of the guitar, or it is unplayable by the four fingers and thumb. In practice, the extension listed in the name should be added to the seventh chord. The lower extensions are optional. (For example, in a ma13 chord, the 9th and 11th need not be played.)

This table shows the theoretical extensions for seventh chords. Notice I said *theoretical*. Don’t stop here, because this is just a step on the way to the real deal...

Extension Table

| Chord Tones | Extended Chord Name | Resulting Extensions |
|------------------------------|---------------------------------|----------------------|
| Major 7 1, 3, 5, 7 | ma9 ma11 ma13 | 9 9,11 9,11,13 |
| Minor 7 1, b3, 5, b7 | mi9 mi11 mi13 | 9 9,11 9,11,13 |
| Dominant 7 1, 3, 5, b7 | 9 11 13 | 9 9,11 9,11,13 |
| Minor 7(b5) 1, b3, b5, b7 | mi9(b5) mi11(b5) mi13(b5) | 9 9,11 9,11,13 |

Those Nasty Elevenths

The eleventh interval is equivalent to the perfect fourth. When played in a chord that contains a major third, the fourth and third can clash. This means major and dominant chords need special consideration when being extended up to or beyond the eleventh. The clash is not a problem in an arpeggio, because the notes are not simultaneous, but it's a real concern when playing a chord. There are a few common practices designed to get around this problem.

Often, the **eleventh is augmented** when extending a major or dominant chord. This avoids the clash of the 11th with the major third. The symbol (#11) should be written on each chord name where this note is used:

Cma7(#11) → 1, 3, 5, 7, #11

C7(#11) → 1, 3, 5, b7, #11

Cma9(#11) → 1, 3, 5, 7, 9, #11

C9(#11) → 1, 3, 5, b7, 9, #11

Cma13(#11) → 1, 3, 5, 7, 9, #11, 13

C13(#11) → 1, 3, 5, b7, 9, #11, 13

Other options to avoid the "3-11 clash":

- 1) **Omit the eleventh** when constructing a major 13th or dominant 13th chord.

Cma13 → 1, 3, 5, 7, 9, 13

C13 → 1, 3, 5, b7, 9, 13

- 2) **Omit the third**, especially on extended dominant chords.

C11 → 1, 5, b7, 9, 11

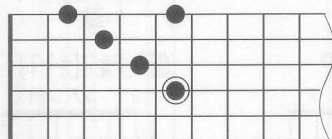
C13 → 1, 5, b7, 9, 11, 13

Exercise #48

Construct the **extended arpeggios**. Include each note just once. Name the pattern numbers.

- 1) Gma9

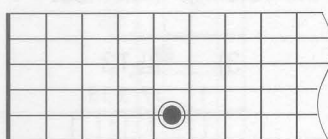
Pattern ____



II

- 2) Dmi9

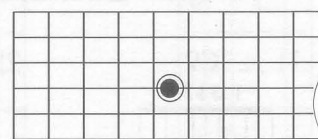
Pattern ____



II

- 3) A9

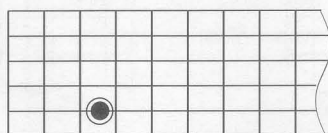
Pattern ____



V

- 4) Emi9(b5)

Pattern ____



VII

- 5) Bma9(#11)

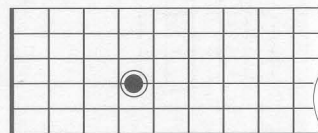
Pattern ____



I

- 6) F#mi11

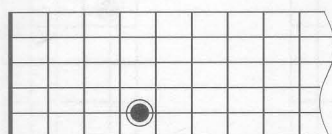
Pattern ____



IV

- 7) Db9

Pattern ____



III

- 8) Ab9(#11)

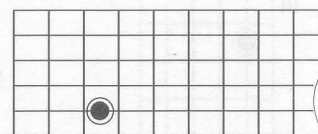
Pattern ____



I

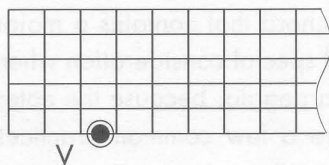
- 9) Ebmi13

Pattern ____

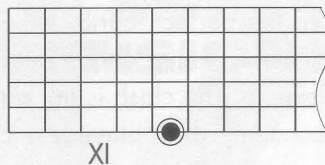


VI

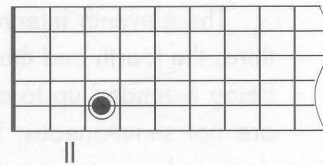
10) B \flat 13
Pattern ____



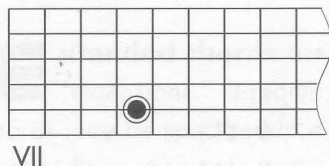
11) Fmi11(b5)
Pattern ____



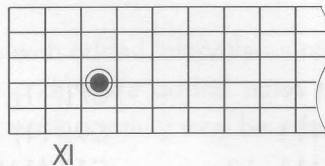
12) Cma13(#11)
Pattern ____



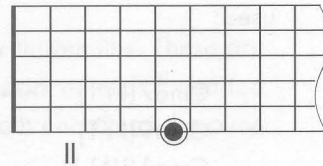
13) G9
Pattern ____



14) D11
Pattern ____



15) Ami13
Pattern ____



Play through each of the above arpeggios, speaking aloud the chord name, pattern number, and voicing.

*"G major ninth, Pattern 4...1-3-5-7-9
D minor ninth, Pattern...[etc.]"*

When building extended chords, we use the same technique for adapting seventh chords to the guitar fretboard: raise or lower notes by an octave to create voicings that have one note per string. It's usually best to keep the extensions on the top of the chord.

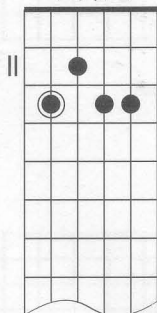
As we said before, it's OK, even preferable, to leave some notes out when constructing an extended chord on the fretboard. The choice depends on the style of music, and what notes the bass or other instruments are playing. Try leaving out the fifth and/or root, in that order. See how that sounds.

Exercise #49

Diagram **extended chords** using the voicings indicated.

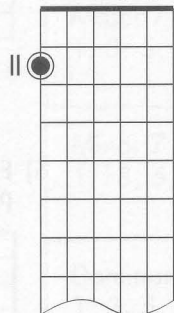
1) C9

1 3 \flat 7 9



2) G \flat ma13

1 7 3 13



3) B \flat 13

1 \flat 7 3 13



4) Dma9

1 3 7 9



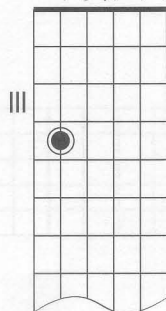
5) F \sharp 7(#11)

1 \flat 7 3 #11



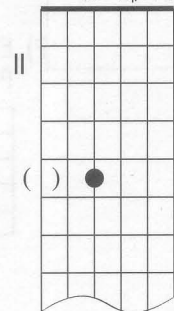
6) D \flat 13

1 3 \flat 7 9 13



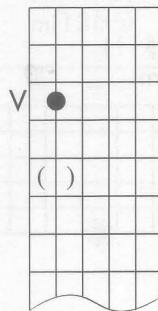
7) A13(#11)

\flat 7 9 #11 13



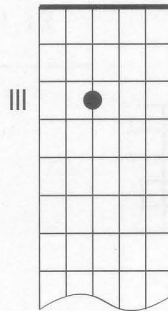
8) E13

\flat 7 3 13 9



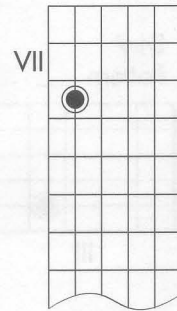
9) G13

\flat 7 3 13 1



10) F9(#11)

1 3 \flat 7 9 #11



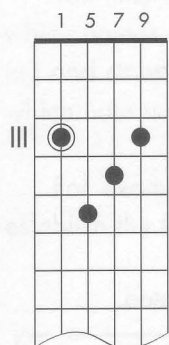
Play each extended chord on the previous page, saying aloud the chord name, pattern number, and voicing.

"C ninth, Pattern 1, 1-3-b7-9..."
G major thirteenth, Pattern 4, 1-7-3-13...(etc.)"

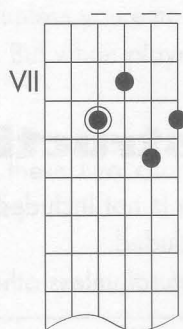
Exercise #50

Write the correct name, pattern number, and voicing for these extended chords.

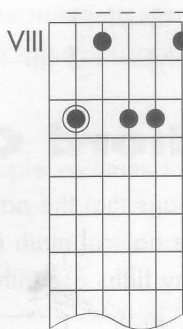
1) Chord Cma9
 Patt 2



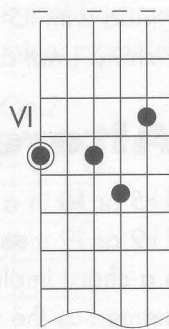
2) Chord _____
 Patt _____



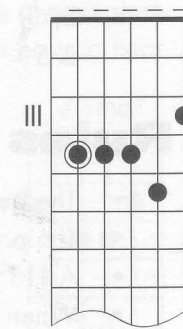
3) Chord _____
 Patt _____



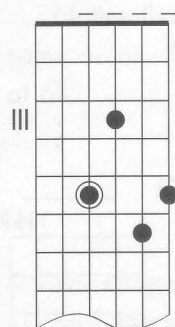
4) Chord _____
 Patt _____



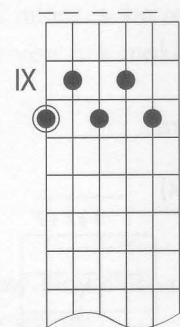
5) Chord _____
 Patt _____



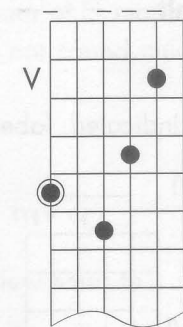
6) Chord _____
 Patt _____



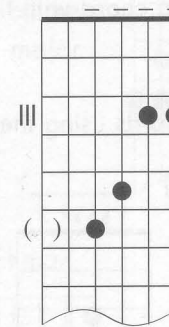
7) Chord _____
 Patt _____



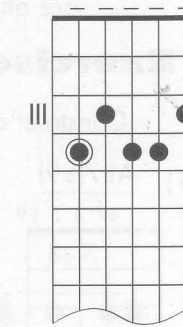
8) Chord _____
 Patt _____



9) Chord _____
 Patt _____



10) Chord _____
 Patt _____



Play each extended chord voicing above, saying aloud the chord name, the pattern number, the voicing, and the note names.

"C major ninth, Pattern 2, 1-5-7-9, C-G-B-D... (etc.)"

18 ALTERATIONS

Objective: Construct altered chords on the fretboard.

An **alteration** is when a chord tone or extension is augmented or diminished. Alterations most often appear in dominant chords, and in some major chords. The rules for altering chords also apply to altering arpeggios.

The possible alterations are $\flat 5$, $\sharp 5$, $\flat 9$, $\sharp 9$, $\sharp 11$, and $\flat 13$. Generally, these alterations are written in parentheses to avoid confusion about the root of the chord. For example:

$B(\flat 5)$ = B major triad with $\flat 5$ = 1-3- $\flat 5$ (B-D \sharp -F)

$B\flat 5$ = B \flat power chord (root and fifth only) = 1-5 (B \flat -F)

Rules of Altered Chord Construction

- The presence of $\flat 5$ or $\sharp 5$ in a chord means that the natural fifth is not included.
- The presence of $\flat 9$ or $\sharp 9$ means that the natural ninth is not included.
- A $\sharp 11$ or $\flat 13$ in a chord implies that any fifths or ninths are *natural* unless otherwise stated.
- When a chord name has the word "alt" in it, the chord is *always dominant*, with altered fifths and/or altered ninths. Which altered fifths and ninths to use is left up to the player to decide, but no natural fifths or ninths are allowed in a chord with the word **alt**.

| C _{alt} | May contain | May NOT contain |
|------------------|---|-------------------------|
| | $\flat 5$, $\sharp 5$, $\flat 9$, $\sharp 9$ | $\sharp 5$, $\sharp 9$ |

Exercise #51

Construct altered chords using the voicings indicated. label the chords.

1) $A\flat 7(\flat 9)$

1 $\flat 7$ 3 5 $\flat 9$

2)

1 $\flat 5$ $\flat 7$ 3

3)

1 3 $\flat 7$ 9 $\sharp 11$

4)

1 3 $\flat 7$ $\flat 9$

5)

1 $\flat 7$ 3 13 $\flat 9$

6)

1 $\flat 7$ 9 $\sharp 11$

7)

1 3 $\flat 7$ $\sharp 9$

8)

1 $\flat 7$ 3 $\sharp 5$

9)

1 $\flat 7$ 3 $\flat 5$

10)

1 7 3 $\sharp 5$

Play through the above altered chords, saying aloud the chord name, pattern number, voicing, and note names.

"A \flat 7(\flat 9), Pattern 4, 1- \flat 7-3-5- \flat 9, A \flat -G \flat -C-E \flat -B \flat ...(etc.)"

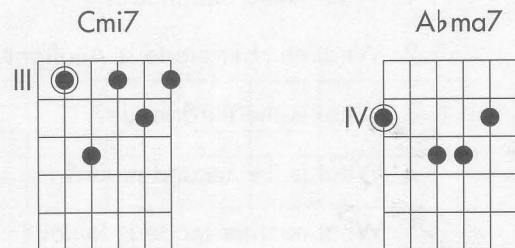
19 MODES

Objective: Memorize the order of the modes. Learn to find the Ionian.

When studying the natural minor scale, you discovered it was related to the major scale you had already learned. To review, the relationship is: "The sixth degree of a major scale is the root of its relative minor."

You may have noticed when practicing the major scale or the natural minor scale that it is hard to hear which note is the root, unless you emphasize the note you want to be the root in some way, like always starting and stopping on it. But when played over a chord progression in a minor or major key, it is easy to hear which note is the root.

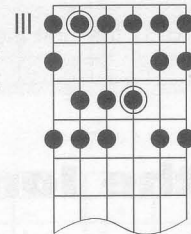
For example, play these two chords a couple of times to establish the C minor key:



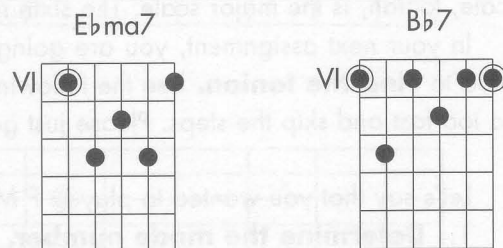
While the sound of those chords is still in your ears, play any pattern of the C natural minor scale. Here's Pattern 2.

Notice that while C minor is the relative minor of Eb major and uses all the same notes, the music you are making does not sound much like Eb major at all.

C natural minor
Pattern 2

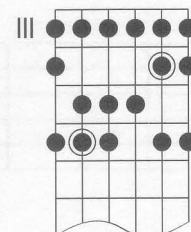


For comparison, now play these chords a few times to establish the major key sound:



Now play the Eb major scale. It's the same notes as the C natural minor scale.

Eb major
Pattern 1



The note perceived to be the root of the scale depends mostly on context: what chord(s) the scale is being played over. Any note can be made to sound like the root of the scale by playing it with the right chords in the background.

This principle applies to *all* the notes of the major scale, not just the sixth degree. Each degree of the major scale is the root of a **mode**. The modes share fingering patterns with the five patterns of the major scale. They use the same notes, yet they sound as different from the major scale as does the natural minor scale.

Memorize the order of the modes, with their numbers and Greek names. Traditionally, Roman numerals are used when writing about mode theory. So put on your sandals and toga, and memorize this list:

- I Ionian (a.k.a. Major)
- II Dorian
- III Phrygian
- IV Lydian
- V Mixolydian
- VI Aeolian (a.k.a. Natural Minor)
- VII Locrian

Practice

When you have the names and numbers memorized, cover up the list with your hand and answer these questions:

1. What is the fifth mode?
2. What number mode is Aeolian?
3. What is the third mode?
4. What is the second mode?
5. What number mode is Ionian?
6. What is the seventh mode?
7. What number mode is Mixolydian?
8. What is the first mode?
9. What number mode is Locrian?
10. What is the sixth mode?
11. What number mode is Dorian?
12. What is the fourth mode?
13. What number mode is Phrygian?
14. What was that fifth mode again?
15. What number mode is Lydian?

Find the Ionian

The most important modes are Ionian and Aeolian, which you already know. The first mode of the major scale, Ionian, is the major scale. The sixth mode of the major scale, Aeolian, is the natural minor scale.

In your next assignment, you are going to play a mode by finding its relative major. To do that, you'll need to **Find the Ionian**. Use the following steps, and don't rush. Everybody messes this up because they go too fast and skip the steps. Please just go slowly at first and follow the steps.

Let's say that you wanted to play in F Mixolydian. To get a specific mode:

1. **Determine the mode number.** Mixolydian is the fifth mode, so F is now "5."
2. **Count down to the Ionian.** With the major scale formula, we can count down to find the Ionian—i.e., the relative major. For example, if F is the 5th degree, then we count 5 4 ^3 2 1. The root must be B \flat .

| | | |
|------------|---|-----------|
| | 5 | F |
| whole step | 4 | E \flat |
| half step | 3 | D |
| whole step | 2 | C |
| whole step | 1 | B \flat |

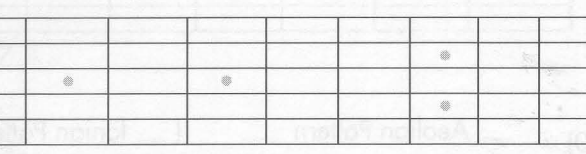
3. **Play the major scale, but start and stop on the specified root.** Play B \flat Ionian from F to F. Voilà! You're playing F Mixolydian.

outlined above to "Find the Ionian."

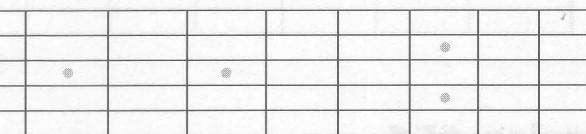
6. G Locrian = ____ Ionian from G to G.
7. A Phrygian = ____ Ionian from A to A.
8. F Dorian = ____ Ionian from F to F.
9. E Lydian = ____ Ionian from E to E.
10. A Mixolydian = ____ Ionian from A to A.

not given. The roots are already circled. Draw a square equal to. Label the diagram with the pattern number of the given figure.

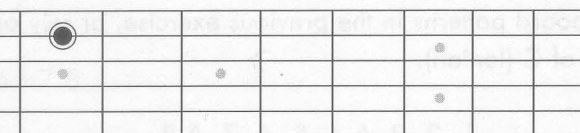
- Pattern 2)



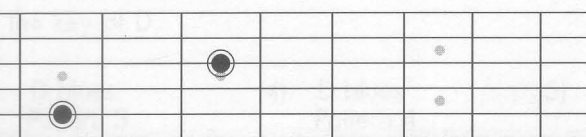
- Pattern ____)



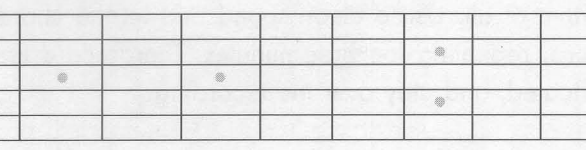
- Pattern ____)



- Pattern ____)



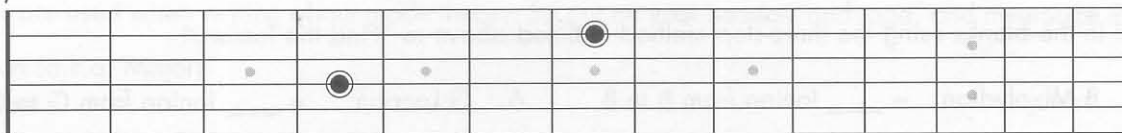
- Pattern ____)



- Pattern ____)



7) — Locrian Pattern — (— Ionian Pattern —)



8) — Mixolydian Pattern — (— Ionian Pattern —)



X

9) — Dorian Pattern — (— Ionian Pattern —)



VIII

10) — Aeolian Pattern — (— Ionian Pattern —)



Exercise #54

Determine the scale spelling for each mode. Ionian (major) and Aeolian (natural minor) are shown. Use the fretboard patterns in the previous exercise, or rely on your knowledge of natural whole and half steps in the key of C (Ionian).

Ionian: 1 2 3 ^ 4 5 6 7 ^ 8

Dorian:

Phrygian:

Lydian:

Mixolydian:

Aeolian: 1 2 ^ b3 4 5 ^ b6 b7 8

Locrian:

Practice

Record each of these typical modal chord progressions for a full three minutes. Don't use any style of rhythm at all. Use a clean sound and let the chords ring for four beats of the metronome on each chord, repeating for three minutes. Then record the next progression. Then rewind, find the modes indicated, and play over the recording.

I C I G I F I G I — C Ionian

I Cmi7 I F9 I Cmi7 I Dmi7 I — C Dorian

I Cmi I Db I — C Phrygian

I Cma7 I D I — C Lydian

I C7 I Bbma7 I — C Mixolydian

I Cmi I Bb I Ab I Bb I — C Aeolian

Check the stage for pocket change and picks...

20 OTHER COMMON SCALES

Objective: Discuss intervallic construction of various scales. Construct patterns.

Scales can be defined by the intervals they contain. Essentially this means that every new scale you learn should be compared to Ye Olde Major: 1 2 3[^]4 5 6 7[^]8. Once again, the caret symbol (^) signifies a half step. Some scales contain a 1 1/2 step interval between notes. To show this, a long line is used (—).

This chapter is here for reference, and to practice the process of finding fingering patterns. I don't expect you to learn five patterns of six different scales and be able to blast through them all in a week! Learning scales, and how to use them, should be spread out over months, even years.

For any scale, five fingering patterns are possible, based on the five root shapes. Strive to create patterns that minimize shifting.

Blues 1—b3 4[^]b5[^]5—b7 8

Country Blues 1 2[^]b3[^]3—5 6—8
(The "Blues Relative")

Harmonic Minor 1 2[^]b3 4 5[^]b6—7 [^]8

Melodic Minor 1 2[^]b3 4 5 6 7[^]8

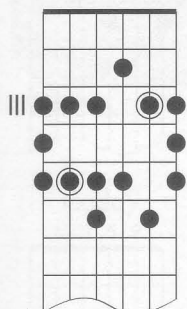
Diminished
(Whole-Half) 1 2[^]b3 4[^]b5 b6[^]b7 7[^]8

Dominant Diminished
(Half-Whole) 1[^]b2 b3[^]3 b5[^]5 6[^]b7 8

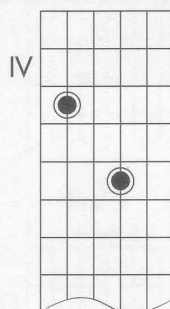
Exercise #55

Diagram the five patterns of the blues scale in the key of D.

1) D blues
Pattern 1



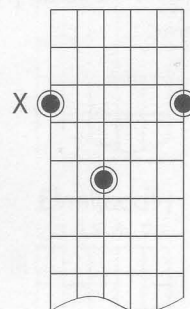
2) D blues
Pattern 2



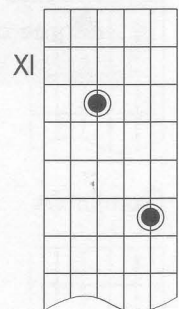
3) D blues
Pattern 3



4) D blues
Pattern 4



5) D blues
Pattern 5

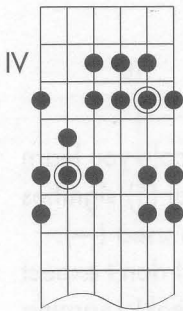


Play each blues scale pattern above. Say the pattern number aloud before you play it—also try saying each scale degree as it's played.

Exercise #56

Diagram the five patterns of the harmonic minor scale in the key of E.

1) E harmonic minor
Pattern 1



21 OTHER COMMON CHORDS

Objective: Practice intervallic construction of various chords.

Besides seventh chords and their extended and altered versions, there are some other common chords you should know. Usually you can deduce the correct spelling from the name.

- In **suspended chords**, the third is replaced by the fourth scale degree, creating a sus4 chord. Recently, the sus2 chord name has also come into use. Though they're technically not true triads, include the three-note sus4 and sus2 chords in your study of triads. They're very common and useful.

sus4 — 1-4-5

sus2 — 1-2-5

- **Sixth chords** are triads with a major sixth added. The triad type, major or minor, stays the same, and the added sixth is *always* major. (That means there's a major 6th interval in a minor 6 chord!)

6 — 1-3-5-6

mi6 — 1-b3-5-6

- **Six/nine chords** are like the sixth chords but with a major ninth added also. The triad type stays the same. These chords are usually considered major or minor, not dominant. They do not contain a seventh.

6/9 — 1-3-5-6-9

mi6/9 — 1-b3-5-6-9

- **Add9 chords** are triads with only major ninths added, no sevenths. Be careful not to confuse an add9 with a dominant ninth chord (C9: 1-3-5-b7-9) or a major ninth chord (Cma9: 1-3-5-7-9).

add9 — 1-3-5-9

mi(add9) — 1-b3-5-9

Exercise #58

In these diagrams, I'll give you the name and a specific voicing. All you have to do is draw the chord. Then, experiment to find a practical fingering. There will be at least one playable fingering for each. It's OK to use your thumb, too.

| | | | | |
|---------------------------------|----------------------------------|------------------------------------|---------------------------------------|--------------------------------------|
| <p>B6 1 5 6 3</p> | <p>E6/9 1 3 6 9 5</p> | <p>Asus4 1 4 5</p> | <p>D7sus4 1 5 b7 4</p> | <p>Gsus2 1 2 5</p> |
| <p>Cadd9 1 3 5 9</p> | <p>Fmi6 1 6 b3 5</p> | <p>Bbmi6/9 1 b3 6 9</p> | <p>Ebmi(add9) 1 b3 5 9</p> | <p>Abmi(ma7) 1 5 7 b3</p> |

Slash Chords

In a slash chord, a triad or seventh chord is superimposed over a bass note that is not the root of the chord. The way to read these aloud is "this over that," e.g., "C over D". When the bass note is a chord tone, the slash chord is a way of specifying an inversion. Otherwise, a slash chord is a way of specifying a voicing for an extended or altered chord.

Exercise #59

Draw the following slash chords.

| | | | | |
|---|---|---|---|--|
| <p>C/E 3 5 1</p> | <p>C/G 5 1 3</p> | <p>C/B 7 3 5 1</p> | <p>C/Bb b7 3 5 1</p> | <p>Cmi/Eb b3 5 1</p> |
| <p>Cmi/G 5 1 b3</p> | <p>Cmi/Bb b7 b3 5 1</p> | <p>Cmi/B 7 b3 5 1</p> | <p>C/F = Fma9 1 5 7 9</p> | <p>C/D = D11 1 11 b7 9</p> |
| <p>Cma7/D = D13 1 b7 9 11 13</p> | <p>C/Eb = Eb13(b9) 1 3 13 b9</p> | <p>C/Gb = Gb7(b5, b9) 1 b7 b9 b5</p> | <p>C/Ab = Abma7(#5) 1 7 3 #5</p> | <p>Cmi/D = D7sus4(b9) 1 b7 b9 4</p> |

Play through all the chords in this chapter, saying aloud the chord name and spelling each voicing.

22 CONCLUSION

Objective: Create a fretboard diagram notebook.

If you've completed all the exercises in this book, you deserve to feel good about yourself. Now you should have an idea how to find things on your own. You may not be fast at it yet, but that's completely normal! Things will get easier now that you are familiar with the guitar's inherent system and have learned a (very) little theory.

Apply what you've learned in this book to everything you play—past, present, and future. For instance, try playing a song you know in a new position. By now, you've probably realized that every note is under your fingers already; you don't have to move more than one fret in either direction.

Final Project

Buy or make a notebook of blank diagrams. In it, systematically diagram each of these basic patterns and keep for your practice:

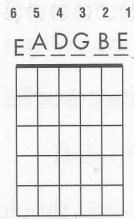
- 5 Root Shapes
- 5 Major Scales
- 5 Minor Scales
- 5 Major Pentatonic Scales
- 5 Minor Pentatonic Scales
- 30 Triad Arpeggios (5 Major, 5 Minor, 5 Augmented, 5 Diminished, 5 Sus4, 5 Sus2)
- 20 Seventh Arpeggios (5 Major, 5 Minor, 5 Dominant, 5 Mi7(b5))
- 72 Triads (12 Major, 12 Minor, 12 Augmented, 12 Diminished, 12 Sus4, 12 Sus2)
- 20 Stock Seventh Chords (5 Major, 5 Minor, 5 Dominant, 5 Mi7(b5))

At fifteen diagrams per page, you'll have about twelve pages. Spend about fifteen minutes a day for the next three months playing the shapes in your book. As you master the basic shapes, add new material to your notebook: scales, modes, chord voicings, arpeggios, etc. Enjoy the process.

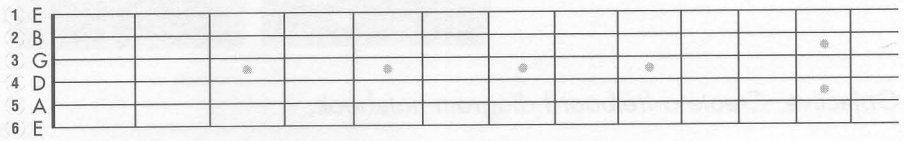
Speaking of enjoying the process, it's been a pleasure for me to work on this book and I sincerely hope it helps you achieve your musical goals. Good luck.

Solutions to Exercises

Ex. 1



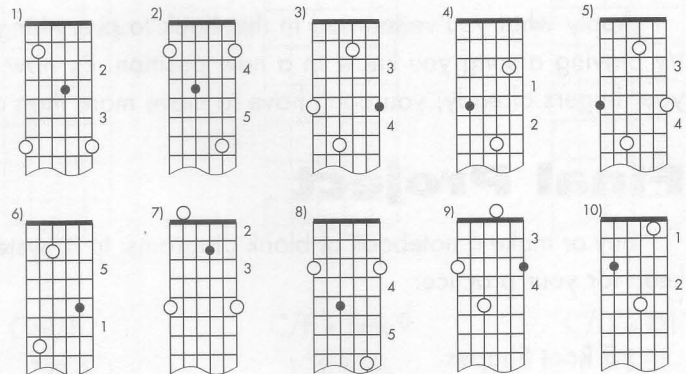
Ex. 2



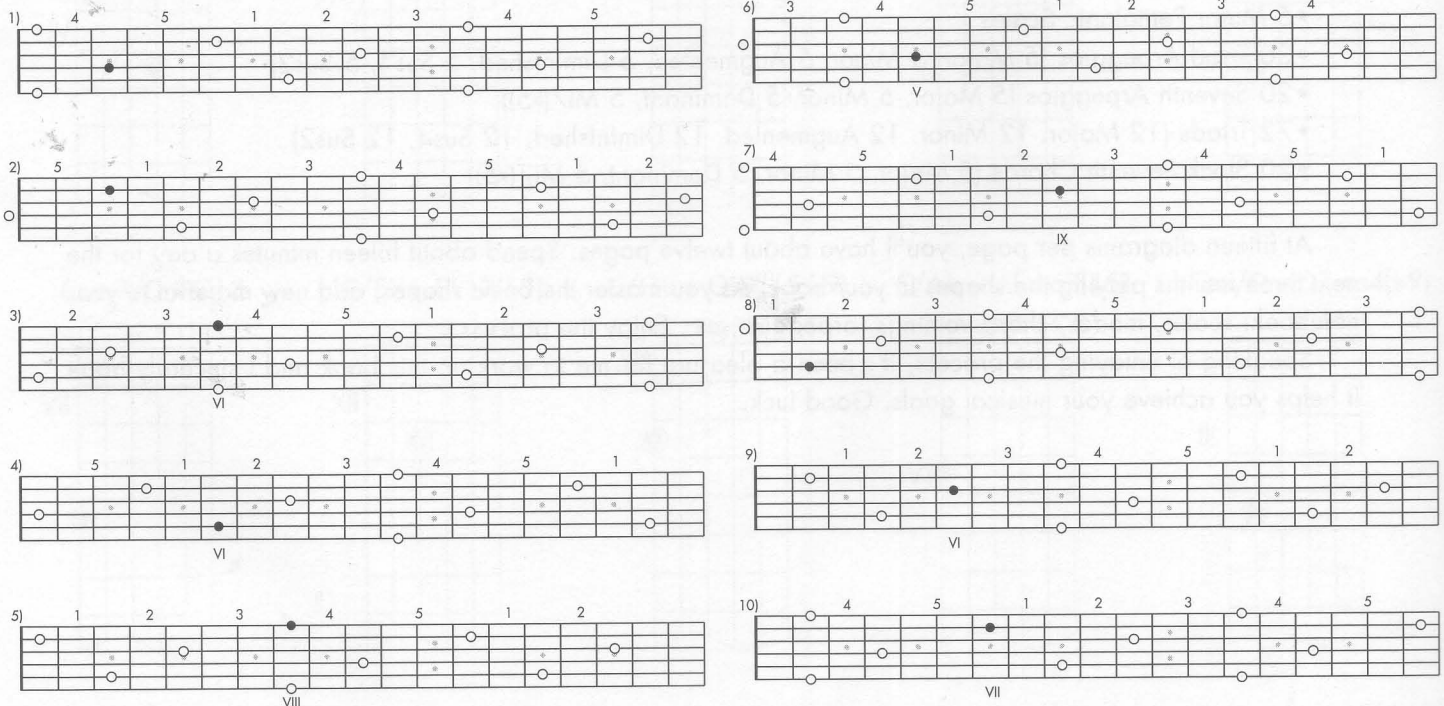
Ex. 3

1. G
2. 2
3. A
4. 3
5. E
6. 5
7. B
8. 6+1
9. E
10. 4

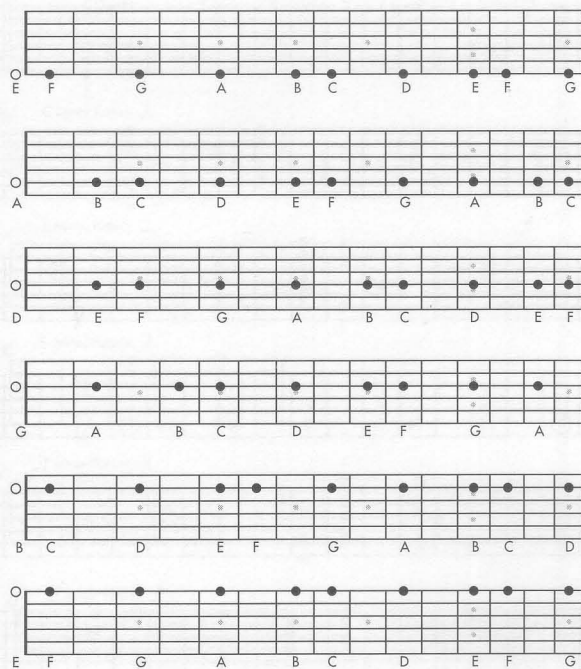
Ex. 4



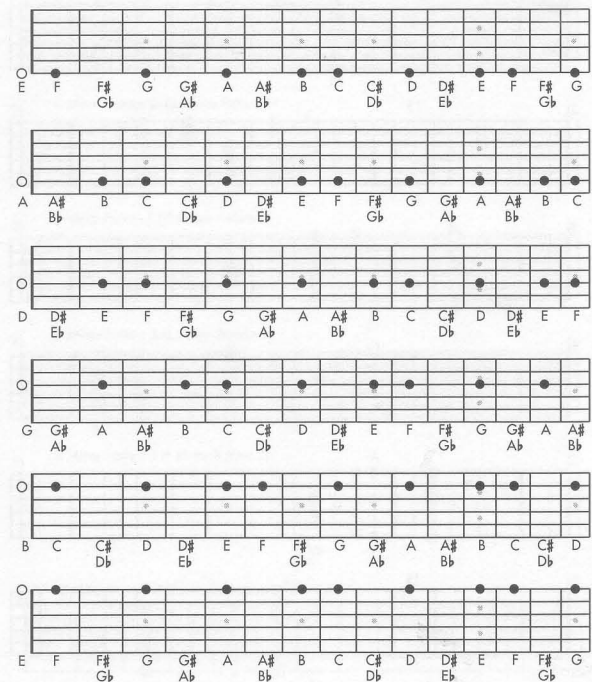
Ex. 5



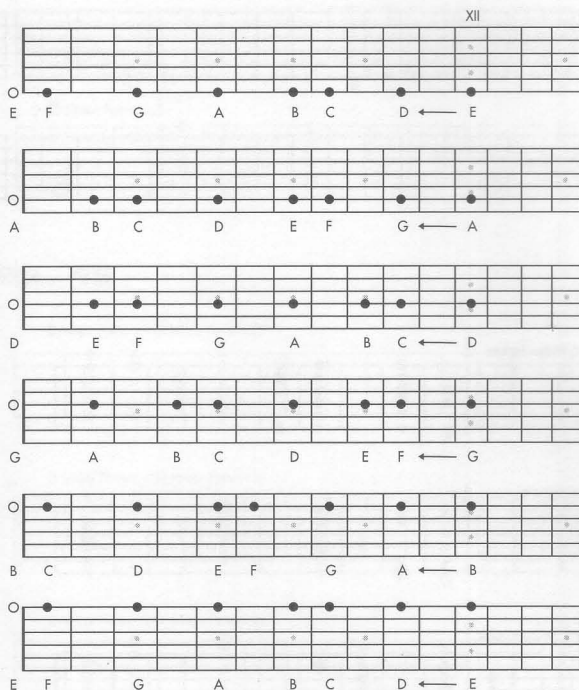
Ex. 6



Ex. 7




Ex. 8





Ex. 9


1. A
2. C
3. D#/Eb
4. G#/Ab
5. B
6. C#/Db
7. F#/Gb
8. F#/Gb
9. C
10. E
11. F#/Gb
12. A#/Bb
13. A#/Bb
14. F
15. F


Ex. 10


1)  VI


2)  IV

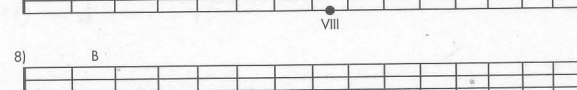
3)  III

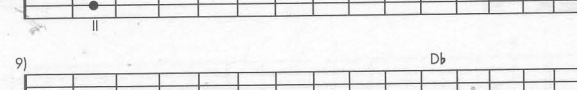
4)  V

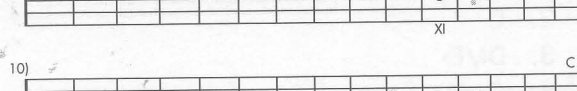
5)  V

6)  IV

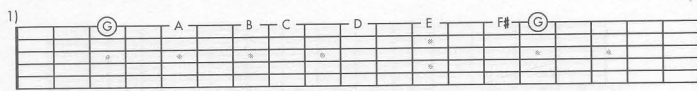
7)  VIII

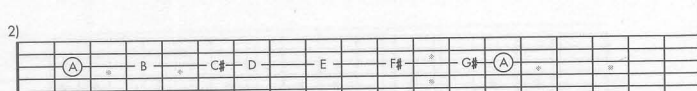
8)  II

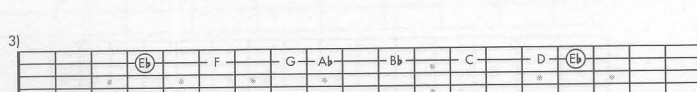
9)  XI


10)  XV

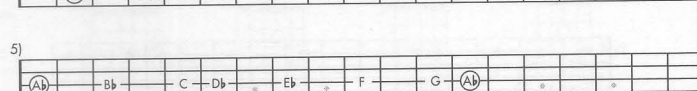
Ex. 11

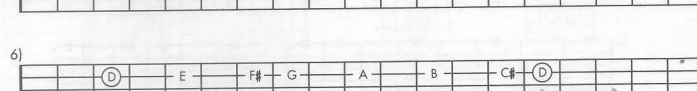
1) 

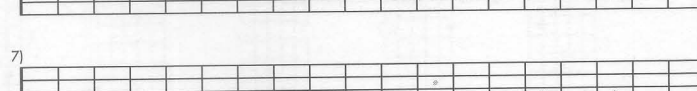
2) 

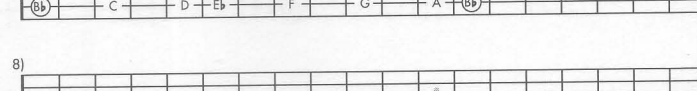
3) 

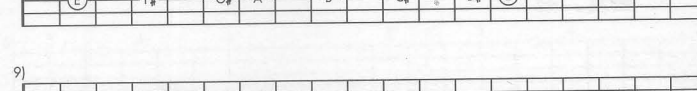
4) 

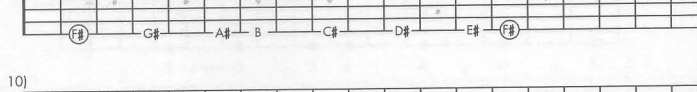
5) 

6) 


7) 

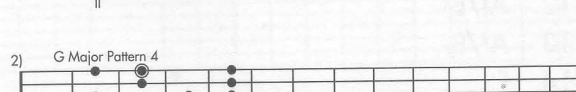
8) 

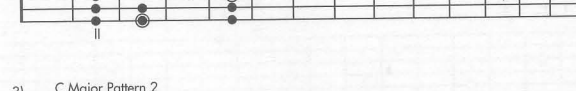
9) 


10) 

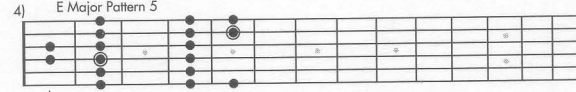
Ex. 12


1) D Major Pattern 1  II


2) G Major Pattern 4  II


3) C Major Pattern 2  II


4) E Major Pattern 5  I

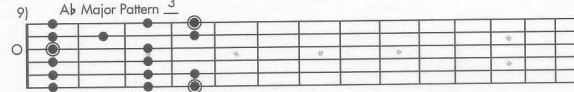
5) Bb Major Pattern 3  II

6) G Major Pattern 5  IV

7) A Major Pattern 4  IV

8) Gb Major Pattern 5  III

9) Ab Major Pattern 3  O

10) Eb Major Pattern 1  III

Ex. 13

1) E Minor Pattern 5
II

2) C Minor Pattern 2
III

3) E Minor Pattern 1
IV

4) A Minor Pattern 3
II

5) D Minor Pattern 3
VII

6) G Minor Pattern 4
II

7) F Minor Pattern 1
V

8) B \flat Minor Pattern 3
III

9) F Minor Pattern 2
VIII

10) F \sharp Minor Pattern 5
IV

Ex. 15

1) D Major Pattern 1 (B Minor Pattern 2)
II

2) G Major Pattern 4 (E Minor Pattern 5)
II

3) C Major Pattern 2 (A Minor Pattern 3)
II

4) E Major Pattern 5 (C \sharp Minor Pattern 1)
I

5) B \flat Major Pattern 3 (G Minor Pattern 4)
II

Ex. 14

1) E Minor Pattern 5 (G Major Pattern 4)
II

2) C Minor Pattern 2 (E \flat Major Pattern 1)
III

3) E Minor Pattern 1 (G Major Pattern 5)
IV

4) A Minor Pattern 3 (C Major Pattern 2)
II

5) D Minor Pattern 3 (F Major Pattern 2)
VII

6) G Minor Pattern 4 (B \flat Major Pattern 3)
II

7) F Minor Pattern 1 (A \flat Major Pattern 5)
V

8) B \flat Minor Pattern 3 (D \flat Major Pattern 2)
III

9) F Minor Pattern 2 (A \flat Major Pattern 1)
VIII

10) F \sharp Minor Pattern 5 (A Major Pattern 4)
IV

6) G Major Pattern 5 (E Minor Pattern 1)
IV

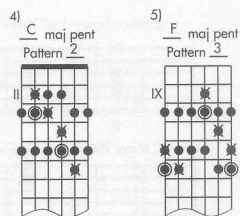
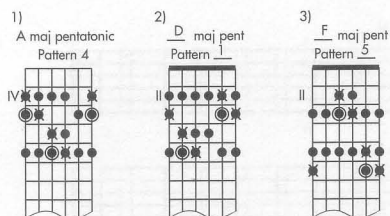
7) A Major Pattern 4 (F \sharp Minor Pattern 5)
IV

8) G \flat Major Pattern 5 (E \flat Minor Pattern 1)
III

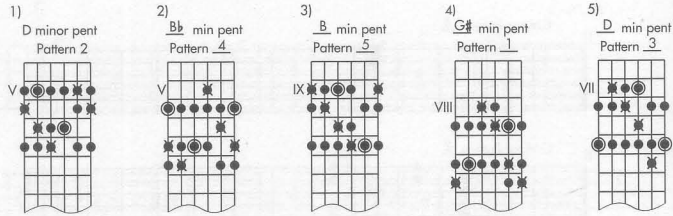
9) A \flat Major Pattern 3 (F Minor Pattern 4)
O

10) E \flat Major Pattern 1 (C Minor Pattern 2)
III

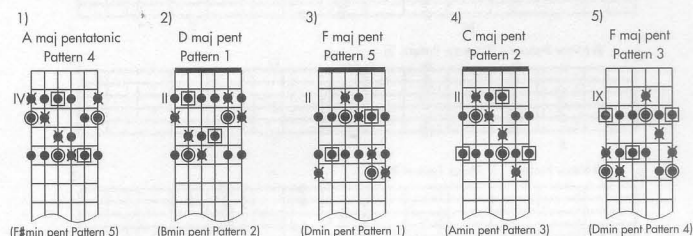
Ex. 16



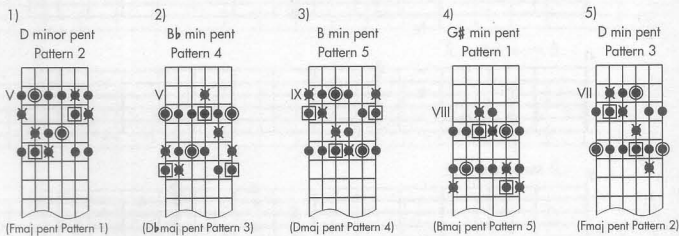
Ex. 17



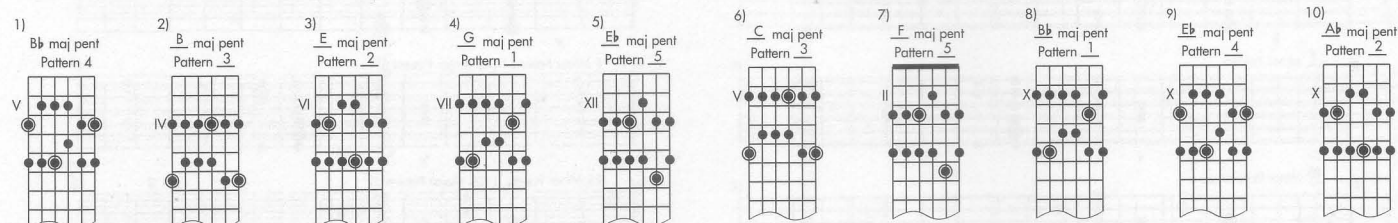
Ex. 18



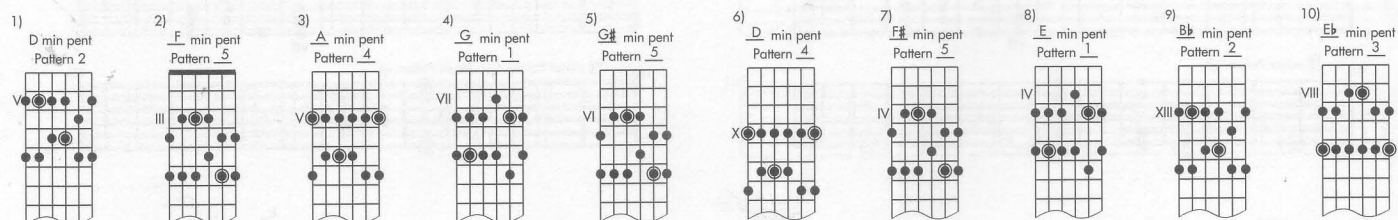
Ex. 19



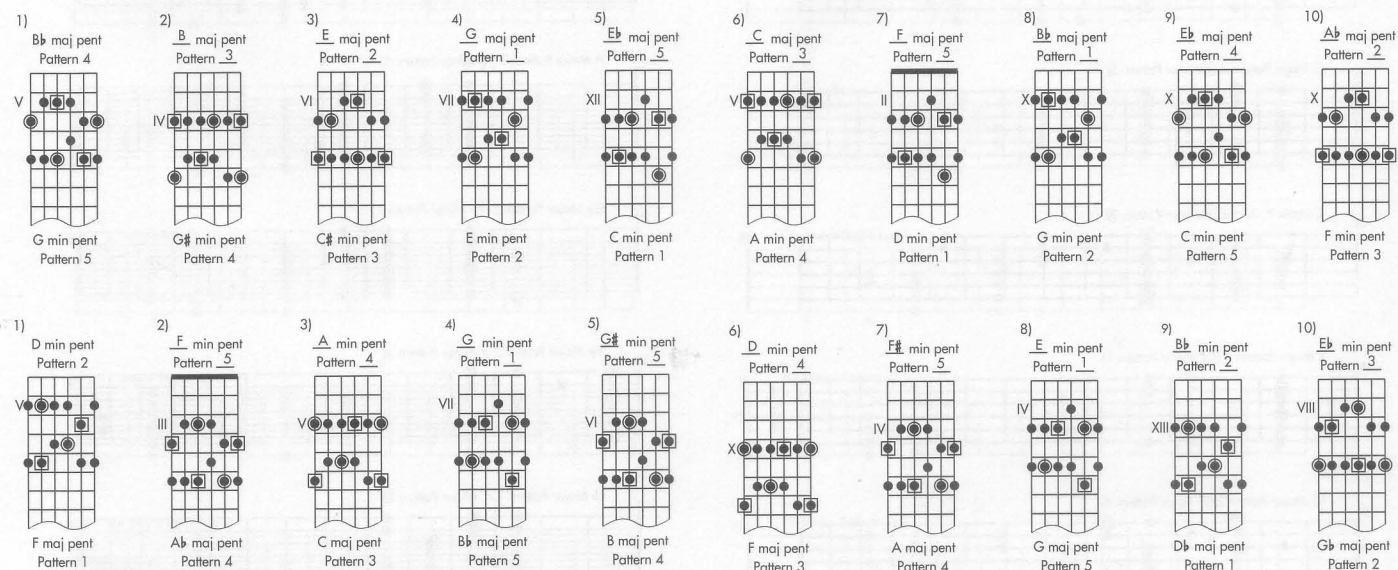
Ex. 20



Ex. 21



Ex. 22



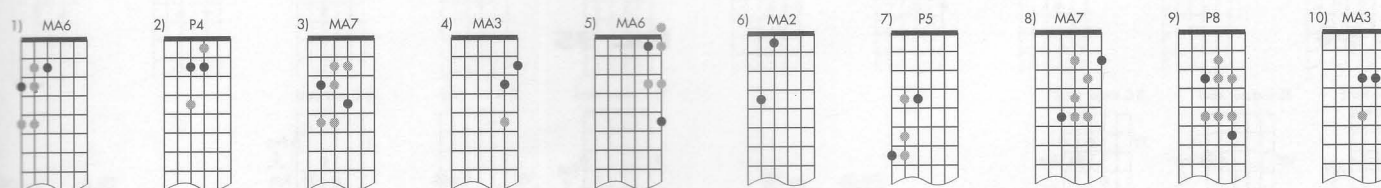
Ex. 23

1. **Unison** is a five-fret distance down the fretboard on adjacent strings. Unison from the third to the second string is a four-fret distance down the fretboard.
2. The **major second** is a two-fret distance on one string. The major second is three frets down from one string to the next. A major second from the third to the second string is down two frets.
3. A **major third** spans four frets on one string. A major third is one fret down from one string to the next. A major third from the 3rd to the 2nd string is on the same fret.
4. A **perfect fourth** is at the same fret on the next higher string. When starting on the 3rd string and ascending by a fourth, the next note is one fret up the neck on the 2nd string. When played on one string, a fourth covers a distance of five frets.
5. **Perfect fifths** are a two-fret distance upward on adjacent strings, except on the 3rd to the 2nd string. There it is a three-fret distance. Fifths have a three-fret shape down the fretboard when skipping a string. I can create a fifth interval with a two-fret reach that skips from the 4th to the 2nd string. I can also get a two-fret fifth interval shape with a skip from the 3rd string to the 1st. Again, I'm crossing the 2nd string, so it's another two-fret reach.
6. **Major sixths** are four frets wide on adjacent strings or one fret wide when skipping a string. Again compensating for the 2nd string tuning difference, the major sixth involves a five-fret reach from the 3rd to the 2nd string. When skipping from the 4th or 3rd string, a major sixth is on the same fret.
7. **Major sevenths** are one fret up when skipping a string. Compensating for the second string tuning difference, the major seventh involves a two-fret upward reach when skipping from the 4th or 3rd string. There are 5th- and 4th-string shapes for major sevenths that can skip two strings. They stretch to a note three frets down, two strings up.
8. **Octaves** are the same as the five root shapes!

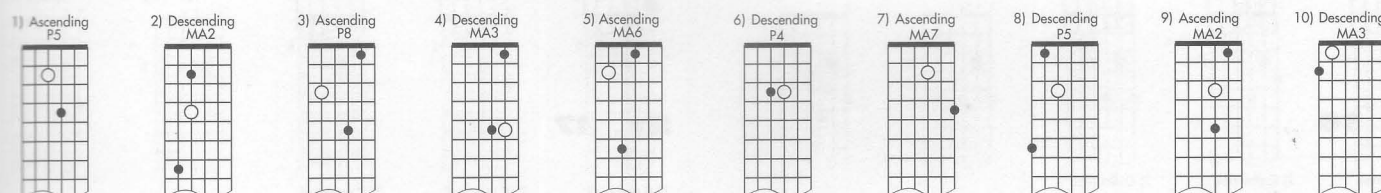
Ex. 27

1. $b5$
2. $\#4$
3. 4
4. $b3$
5. $b3$
6. $b3$
7. $b7$
8. $b7$
9. $b7$
10. $\#5$
11. $b6$
12. 3
13. $b5$
14. $\#2$
15. $b6$

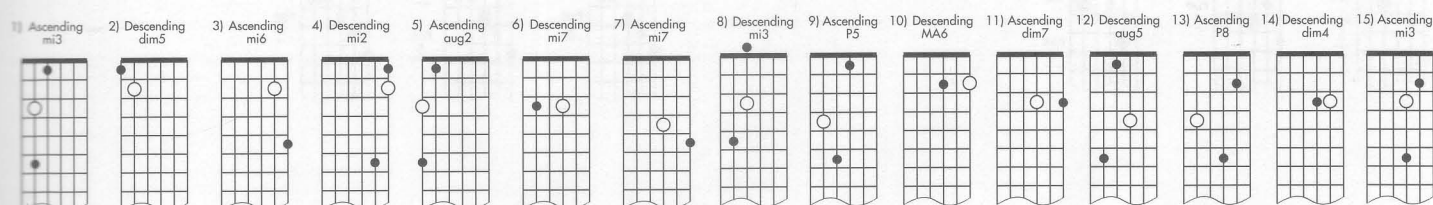
Ex. 24



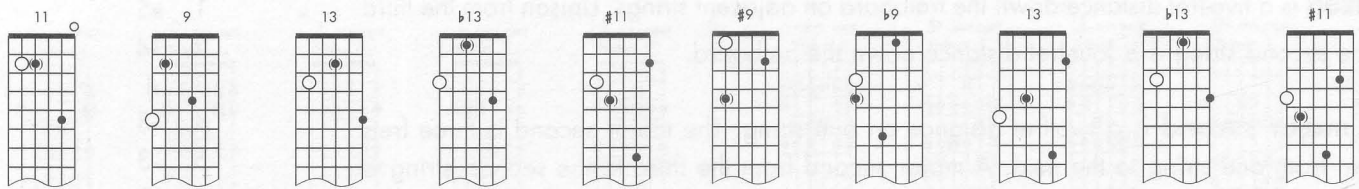
Ex. 25



Ex. 26



Ex. 28



Ex. 29

- | | | | | |
|--------|---------|--------|--------|---------|
| 1. #9 | 2. #11 | 3. 11 | 4. b13 | 5. b9 |
| 6. 12 | 7. b9 | 8. 9 | 9. 13 | 10. 13 |
| 11. 13 | 12. #11 | 13. b9 | 14. 9 | 15. #11 |

Ex. 30

1) D major triad arp

Pattern 1



2) D major triad arp

Pattern 2



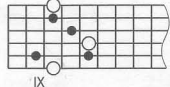
3) D major triad arp

Pattern 3



4) D major triad arp

Pattern 4



5) D major triad arp

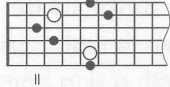
Pattern 5



Ex. 31

1) D minor triad arp

Pattern 1



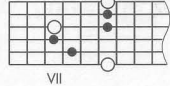
2) D minor triad arp

Pattern 2



3) D minor triad arp

Pattern 3



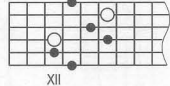
4) D minor triad arp

Pattern 4



5) D minor triad arp

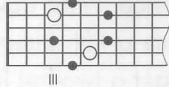
Pattern 5



Ex. 32

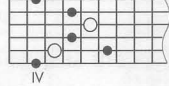
1) D dim triad arp

Pattern 1



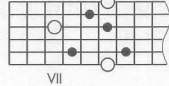
2) D dim triad arp

Pattern 2



3) D dim triad arp

Pattern 3



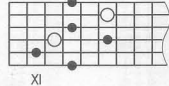
4) D dim triad arp

Pattern 4



5) D dim triad arp

Pattern 5



Ex. 33

1) D aug triad arp

Pattern 1



2) D aug triad arp

Pattern 2



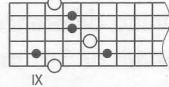
3) D aug triad arp

Pattern 3



4) D aug triad arp

Pattern 4



5) D aug triad arp

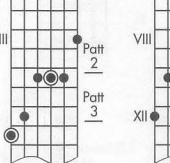
Pattern 5



Ex. 34

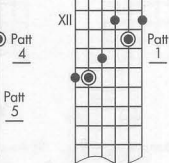
1) C major triad

III



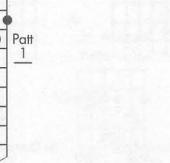
2) C major triad

VIII



3) C major triad

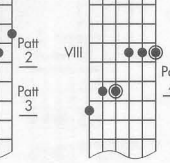
XII



Ex. 35

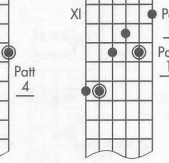
1) C minor triad

III



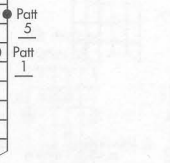
2) C min triad

VIII



3) C min triad

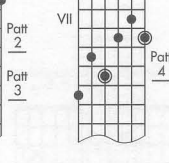
XI



Ex. 36

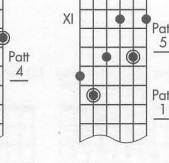
1) C dim triad

II



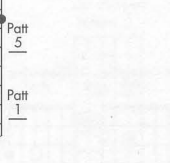
2) C dim triad

VII



3) C dim triad

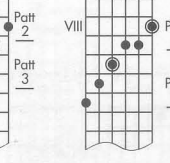
XI



Ex. 37

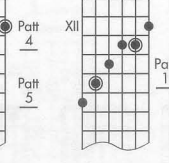
1) C aug triad

IV



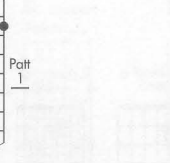
2) C aug triad

VIII

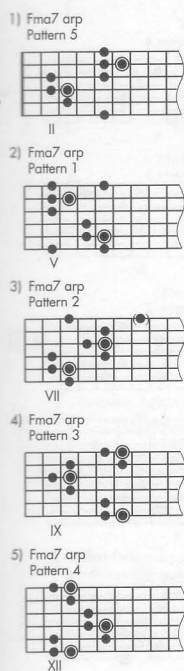


3) C aug triad

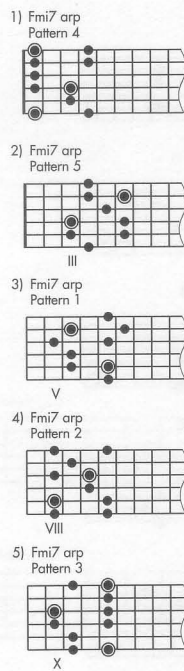
XII



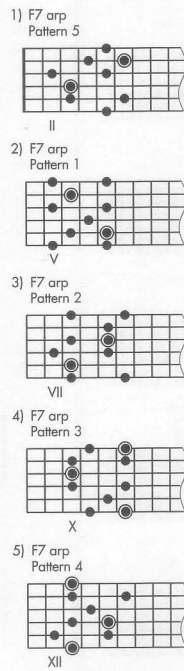
Ex. 38



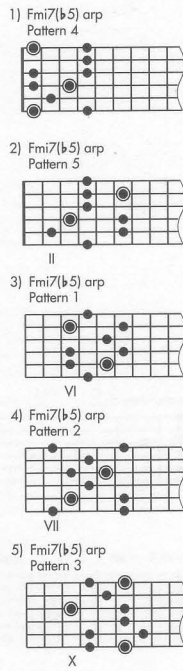
Ex. 39



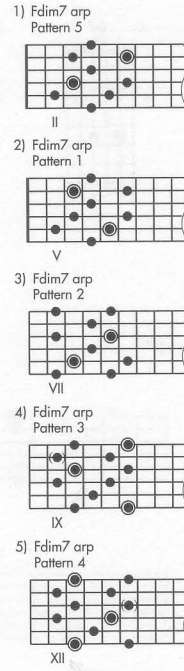
Ex. 40



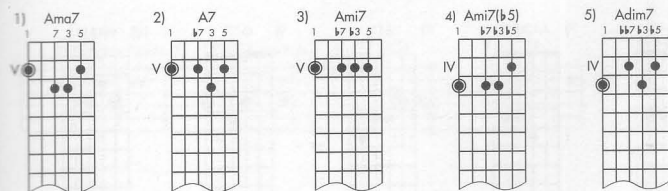
Ex. 41



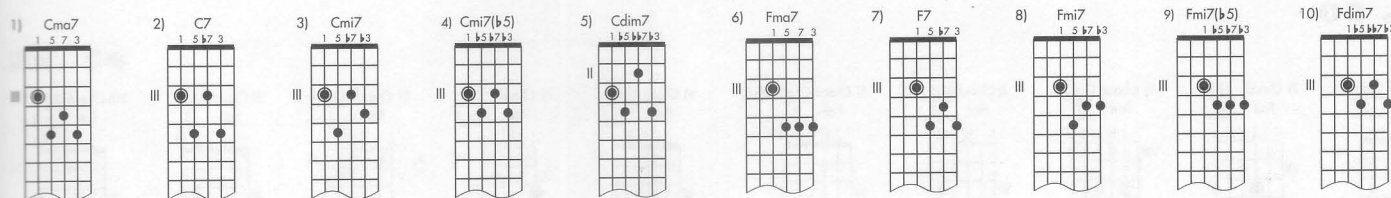
Ex. 42



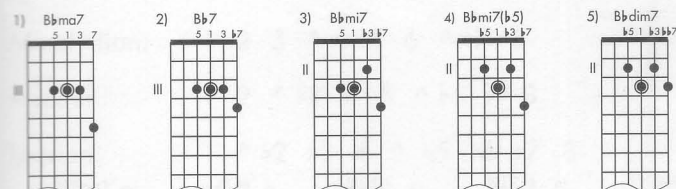
Ex. 43



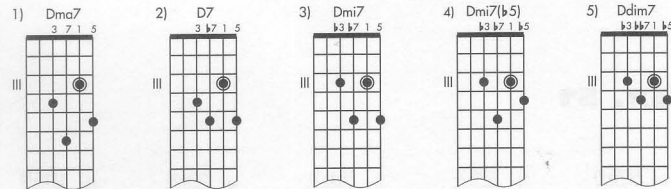
Ex. 44



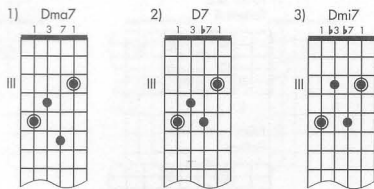
Ex. 45



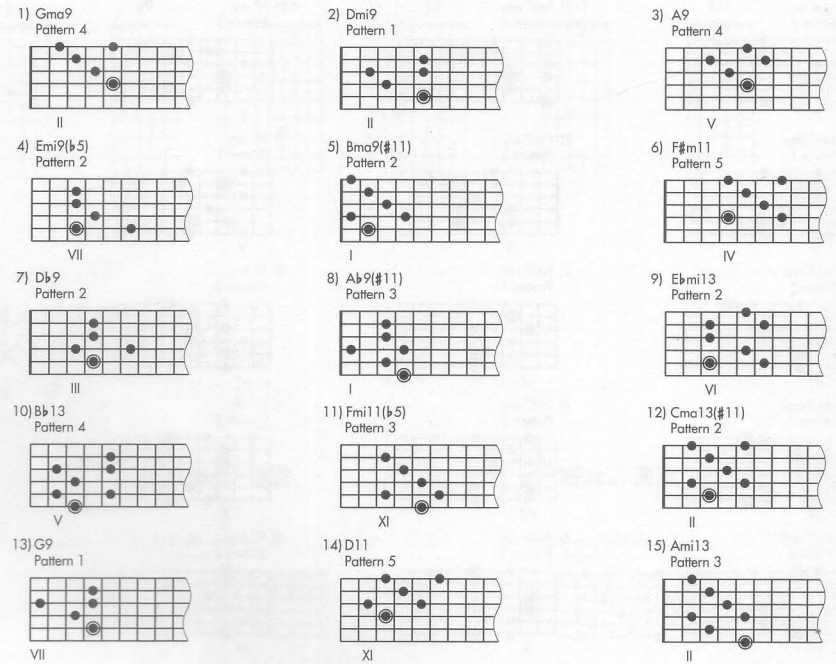
Ex. 46



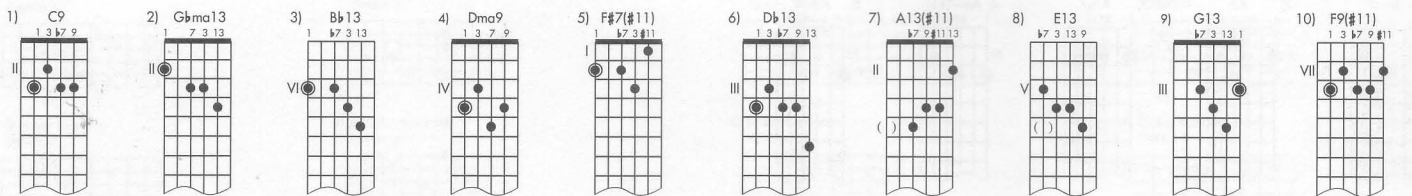
Ex. 47



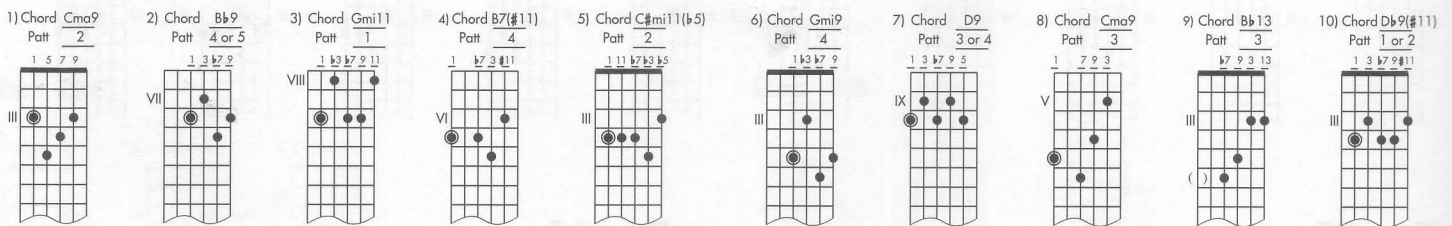
Ex. 48



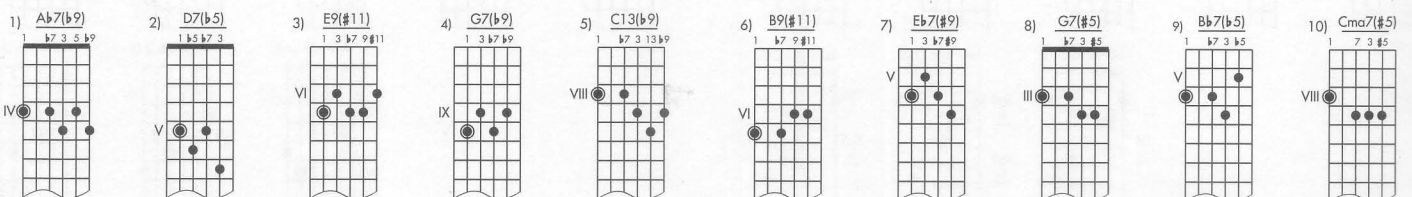
Ex. 49



Ex. 50



Ex. 51



Ex. 52

- | | |
|--------------|--------------|
| 1. E \flat | 6. A \flat |
| 2. G | 7. F |
| 3. D | 8. E \flat |
| 4. A | 9. B |
| 5. F | 10. D |

Ex. 53

1) G Mixolydian Pattern 4 (C Ionian Pattern 2)

2) C Lydian Pattern 2 (G Ionian Pattern 4)

3) F# Dorian Pattern 5 (E Ionian Pattern 1)

4) E Phrygian Pattern 2 (C Ionian Pattern 4)

5) A Aeolian Pattern 3 (C Ionian Pattern 2)

6) G Lydian Pattern 1 (D Ionian Pattern 3)

7) F# Locrian Pattern 5 (G Ionian Pattern 5)

8) C# Mixolydian Pattern 5 (F# Ionian Pattern 3)

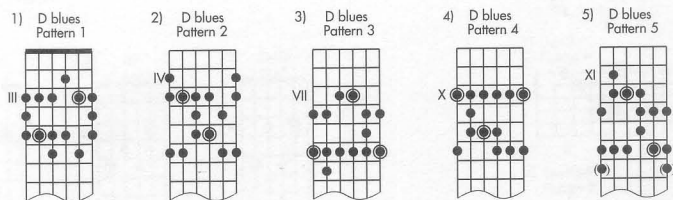
9) E \flat Dorian Pattern 3 (D \flat Ionian Pattern 4)

10) B Aeolian Pattern 4 (D Ionian Pattern 3)

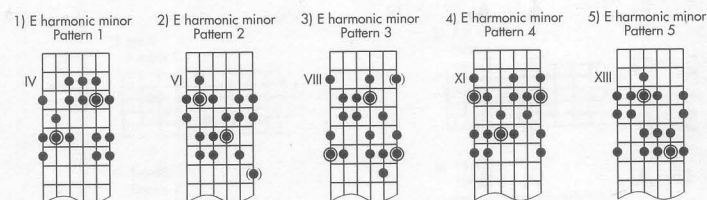
Ex. 54

- | | |
|-------------|--------------------------|
| Ionian: | 1 2 3 ^ 4 5 6 7 ^ 8 |
| Dorian: | 1 2 ^ b3 4 5 6 ^ b7 8 |
| Phrygian: | 1 ^ b2 b3 4 5 ^ b6 b7 8 |
| Lydian: | 1 2 3 #4 ^ 5 6 7 ^ 8 |
| Mixolydian: | 1 2 3 ^ 4 5 6 ^ b7 8 |
| Aeolian: | 1 2 ^ b3 4 5 ^ b6 b7 8 |
| Locrian: | 1 ^ b2 b3 4 ^ b5 b6 b7 8 |

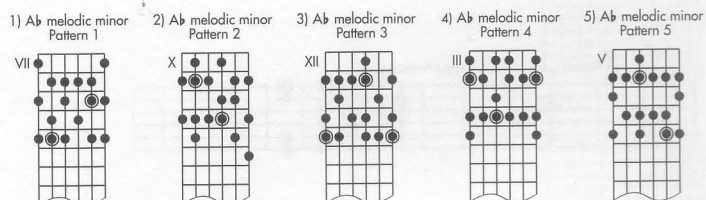
Ex. 55



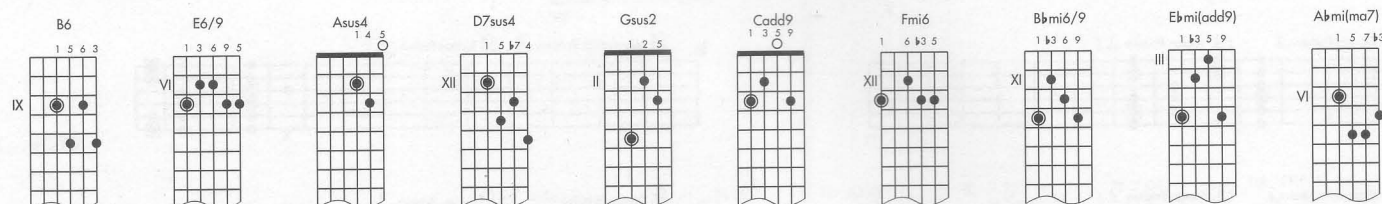
Ex. 56



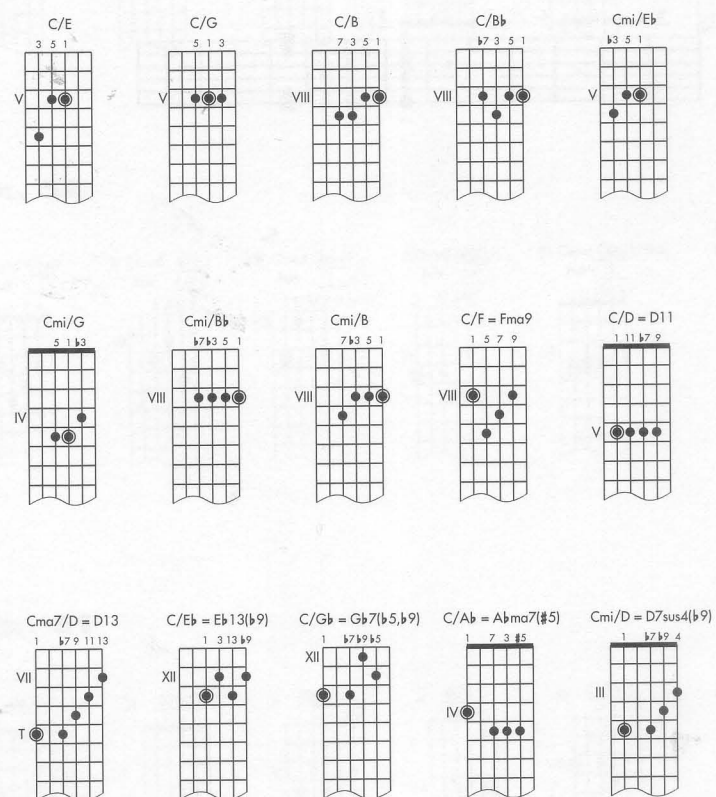
Ex. 57



Ex. 58



Ex. 59

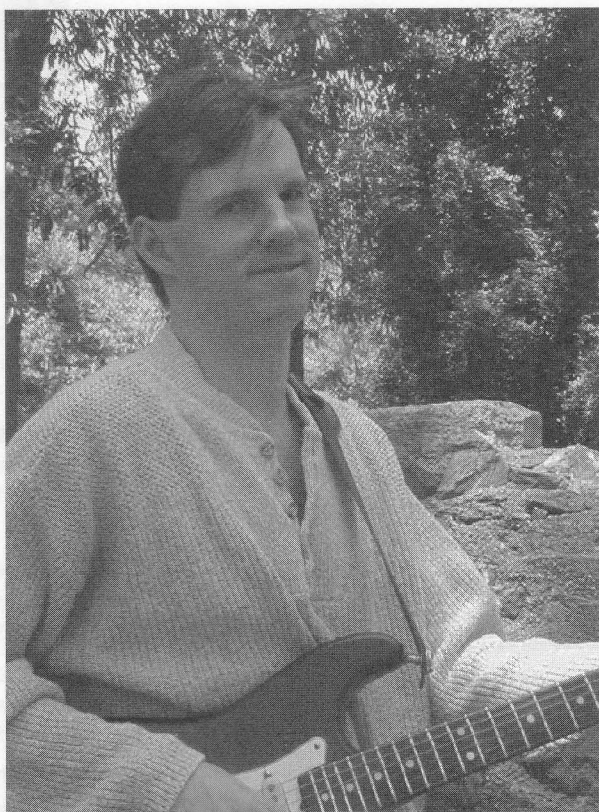


About the Author

Barrett Tagliarino has been an MI instructor since 1987 and was Rock Department Head at Hohner MusikSchule in Vienna, Austria in 1994. He's toured on boats, trains, and buses, by plane, van, and auto, performing countless gigs and sessions, and teaching seminars, clinics, and private lessons.

Barrett has played guitar for CD sessions, TV shows, radio commercials, and karaoke soundtracks. His teaching skills are featured on the Star Licks instructional video, *Classic Rock Guitar Soloing*. He has also been published in *Guitar Player* and *Guitar One*.

To hear the latest recordings by Barrett and other artists, visit the author's website, monsterguitars.com.





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